THE PEX REPORT
2018

Global State of Process Excellence & Transformation 2018:
Riding the storm of digital change

CONTENTS

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Survey commentary

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North American Practice Director for Business Transformation at 3 major international consulting firms, CIO, Sr. Principal, and Executive OPEX Consultant with 25+ years experience selling and delivering support for business transformation, IT modernization/ improvement, IT strategy and planning, business operation improvement, and aggressive cost reduction to healthcare and insurance companies.

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Global management consulting experience with Fortune 500 companies leading large scale Strategy and Transformation engagements delivering tangible and long term value to clients.

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Features

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Loren is a Lean Master and results-oriented Relationship, Client Services and Operations Manager with over 20 years of demonstrated success in the financial services industry. He specialises in developing profitable client relationships, delivering high quality services, leading and overseeing significant Lean project initiatives, cross-selling products, and running operations groups effectively.

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Samantha Bureau-Johnson is VP, Enterprise Process Solutions & PMO at Blue Cross NC. She is a seasoned executive who translates business strategy into execution.

Taking entrepreneurial and nimble adaptive leadership, her specialisms are transformation, strategy execution and change management. Samantha also believes in developing talent as a trustworthy and transparent leader. Her extensive business and technical acumen, makes her an expert in delivering technology assisted business solutions.

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Bill Cohen was the first graduate of the PhD program that Peter Drucker co-developed at what is now the Masatoshi Ito and Peter F. Drucker Graduate School of Management. Graduating and becoming Drucker's friend, he applied Drucker's methods and rose to become an Air Force general and the author of more than 50 management books published in 23 languages. He is the President of the Institute of Leader Arts which offers a unique corporate training program based on Drucker's methods.

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After more than 15 years at ING Belgium, Thierry joined BNP Paribas in 2009. He has successfully led a wide range of digital projects and programs for the past 20 years including web and mobile, contact centre, ATM, and CRM.

As Chief Digital Officer for BNP Paribas Wealth Management, Thierry's job is to develop and oversee the Digital Strategy for Wealth Management on a global level – providing country-based support for the deployment of all new projects. Thierry's strong foundation in international management, strategic business planning and program management, underpins his belief that 'each and every initiative is an equally important step along the path to bring about the deep transformation of our business.'

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Debashis Sarkar is an internationally recognized name for customer-centricity and lean management. He is counted among world's leading lights on lean management and credited with pioneering work tools, techniques and approaches. His thoughts and ideas can be found in his 8 books and more than 70 papers authored by him.

He is currently the managing partner of boutique consulting firm Proliferator Advisory & Consulting www.proliferator.net and also the founder of Proliferator Academy www.proliferatoracademy.net. Both these entities focus on making companies customer-centric and operationally excellent.

Deb is a Fellow of American Society and Quality and recipient of Phil Crosby Medal in 2014.

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With over 15-year experience in helping businesses transform and engage with customers better, I strongly believe that moving fast matters. The mission of bpm'online is to help companies **ACCELERATE!**

Bpm'online is a global business software company leading in the space of business process automation and CRM. The company has been highly recognized as a market leader by key industry analysts. Bpm'online products are included into Gartner Magic Quadrants, Forrester Waves and other leading research reports. Its intelligent platform accelerates sales, marketing, service and operations for thousands of customers and hundreds of partners worldwide.

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Manish Rai is Vice President of Product Marketing at Automation Anywhere. Rai is a Silicon Valley veteran with more than 15 years of experience in marketing industry leading technology solutions spanning Cognitive, AI, RPA, and Mobility. Rai was previously VP of Corporate Marketing at Meru Networks, a publicly listed company that was acquired by Fortinet. Prior to Meru, Rai helped drive rapid growth for mobility solutions at Aruba Networks. Earlier in his career, he held senior positions at Motorola, eGain and Booz Allen and Hamilton. Rai has an MBA from The Wharton Business School and an MSEE from The University of Arizona.

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Ian has worked in trusted positions with high profile individuals and major companies. He has produced films about businesses for SMEs and blue chip companies on locations including Managua, Panama and Gothenburg.

As well as scripting television and radio, Ian's live event experience led to writing an acclaimed book, Insider Secrets of Public Speaking, running communications workshops on both sides of the Atlantic and coaching politicians, Olympians and CEOs on public speaking and crisis communications.

Ian's passion is helping businesses of all sizes understand how technology and communication can give them a competitive edge, and how personal change can drive transformation in the wider world.Today he is Editor of PEX Network for IQPC, bringing the latest business news to a global audience of C-suite leaders and decision makers.

ABOUT THE PEX NETWORK

The Process Excellence Network is a global community for process professionals, business leaders and executives who want to improve their businesses through process and operational excellence. With a global membership of 135,000+, and a burgeoning global portfolio of live events, webinars, and networking opportunities, our mission is to inspire and inform our members with access to practical advice on business improvement tools, methodologies and technologies in order to achieve their business goals.

PEXNetwork.com provides expert commentary and learning resources developed by experienced process professionals and industry insiders. The focus is on peer to peer sharing of what it really takes to harness the power of people, process and technology and improve business operations. Coverage includes Business Process Management (BPM), Robotic Process Automation (RPA), Lean, Change Management, Operational Excellence, Six Sigma & Quality, Performance Management, Information Technology Trends and Customer Experience.

Become a member at www.pexnetwork.com >

ABOUT THE REPORT

The annual PEX Report is *the* benchmarking report for the process industry.

851 PEX Professionals responded to our survey, and the findings truly represent the state of play around the world. Process Excellence has a place in every organization - from the kitchen table startups to the biggest players on the planet, your purpose is to make work more efficient, more productive and more profitable. Our purpose is to give you the information you need to achieve this. For twenty years, we've been charting the progress of process, and providing insights into where the community is, sorting the passing fads from the genuine game changers.

This year we have commentary and features that will give you a new perspective, whether that's from a different country, a different generation - or even from outer space. As a business community, our feet are always squarely on the ground, but our vision is always towards excellence. And this report is your guide not only to where we are, but where we can be, if we have the courage to make that journey.

Ian Hawkins
Editor

INTRODUCTION
Cathy Gu, Event Director - PEX Network

Dear colleague

It's been 20 years of disruptive innovation... From the birth of the smart phone to the rise of the shared economy, virtual currency and AI, the business world has faced an era of unprecedented change. Yet we're in the vice-like grip of the Vortex of Change. A new era is dawning: size is no longer a guarantee for success, business models are being turned upside down, and relationships with customers and workforce are being redefined. What has proven successful in the past will no longer be sufficient. To stay ahead, it's imperative for organizations to innovate, "fail fast", reinvent and transform.

Over this exciting time, PEX Network and OPEX Week has deeply rooted itself in the world of process excellence and business transformation, leading the way in showcasing practical and innovative approaches business are using to transform their process and customer experience, in the context of all this change.

And what a journey that has been! From lean six sigma to design thinking, from BPM to Robotics, from process improvement to disruptive 10x performance, from internal process mapping to customer facing journey development, the scope and depth covered by our annual flagship events has been deep and wide.

In our 20th anniversary year, the 2018 Annual PEX Report and OPEX Week 2019 captures the key theme of riding this incredible pace of change by leveraging the elements of Process, People and Technology to drive impactful business transformation.

Topical issues being addressed in 2019:

• **Rethinking value creation through business transformation to stay ahead of the speed of change**
• **Combining lean methodologies with design thinking, robotics and analytics to maximize business impact**
• **Developing a human based leadership for long term growth and performance**
• **Driving digital transformation through cutting-edge advancements in BPM, Analytics, Robotics and AI**
• **Revolutionizing customer experience through process re-design, co-creation and digital transformation**

I hope you enjoy reading this report and look forward to meeting you in Orlando at the 20th OPEX Week: Business Transformation World Summit.

Cathy Gu
Event Director, 20th OPEX Week:
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PEX Network

PROCESSEXCELLENCENETWORK.COM   OPEXWEEK.COM

STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

How many full-time employees are in your company?

32%   **19%**   **19%**   **7%**   **23%**

1 to 100   101 to 1000   1,001 to 5,000   5,001 to 10,000   More than 10,000
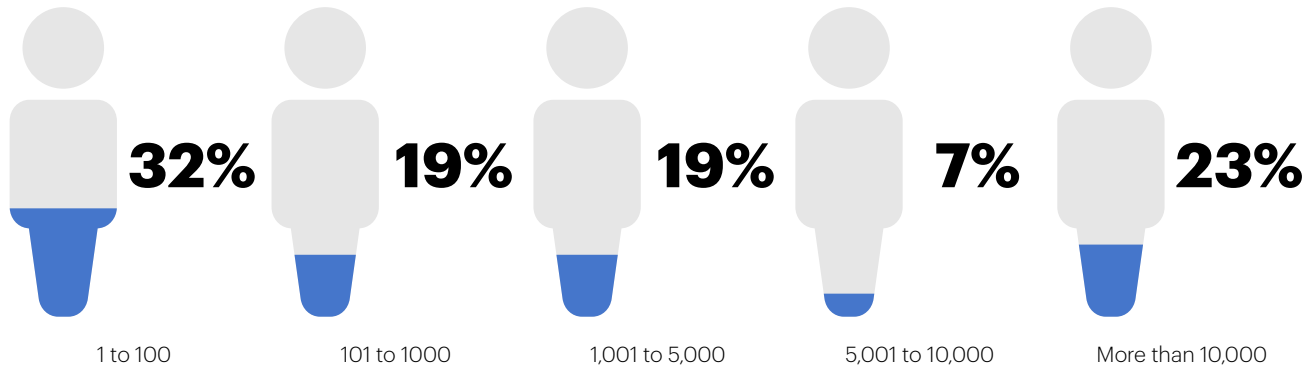
PEX: the proportion of businesses under 100 employees is up on last year's figure (which was 24%). As the Network is growing, it looks as though we are welcoming more SMEs into the Process Excellence community, which may be an indication that more businesses are instituting BPM, RPA and AI at an earlier stage.

What is your company's primary industry?

Industry	%
Business/Consulting Services	**17%**
Financial Services	**12%**
Manufacturing	**10%**
Energy	6%
Education/Research	5%
Transportation & Logistics	5%
Government	5%
Pharmaceutical/Biotechnology	5%
Healthcare	4%
Insurance	4%
Automotive	3%
Computers/Electronics	3%
Aerospace/Defense	2%
Food and Beverage	2%
Telecommunications	2%
Chemicals	1%
Construction	1%
Hospitality	1%
Mining/Minerals	1%
Retail	1%
Other	10%
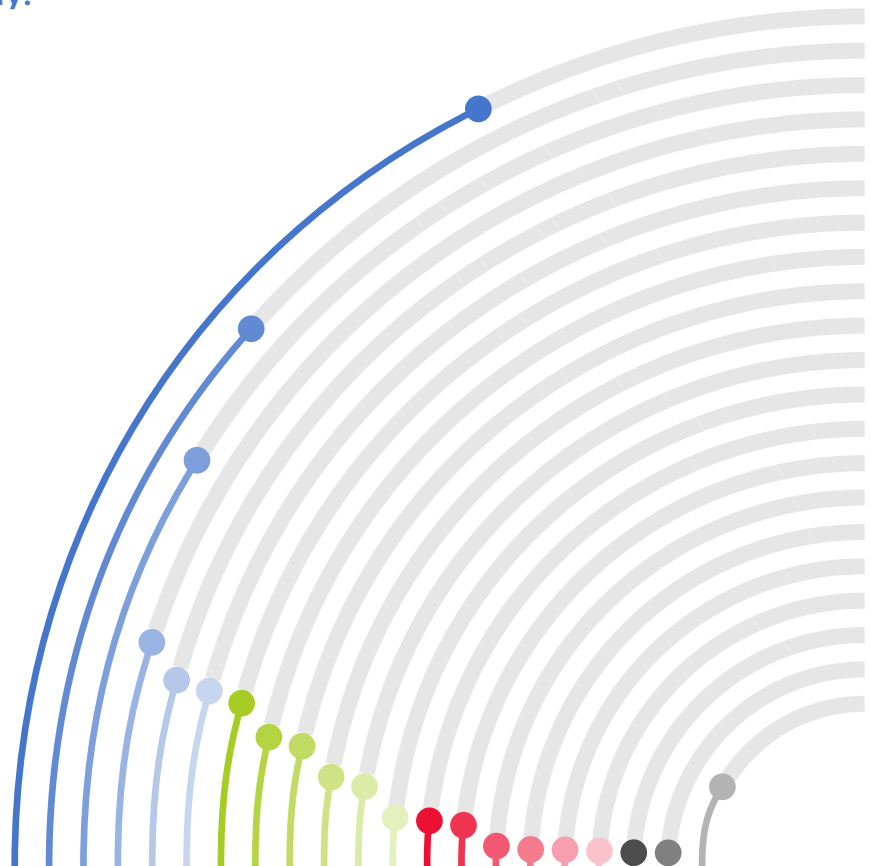
PEX: Year on year, business and consulting services are out ahead with financial services. This suggests that some sectors are much more open to Process Excellence ideas than others – which suggests opportunities in areas such as hospitality and retail.

STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

In which region of the world are you based?

45% North America	Europe (non Nordic) **16%**
7% Central / South America	Middle East **5%**
3% Nordic	Asia **16%**
4% Africa	Australia / New Zealand **4%**
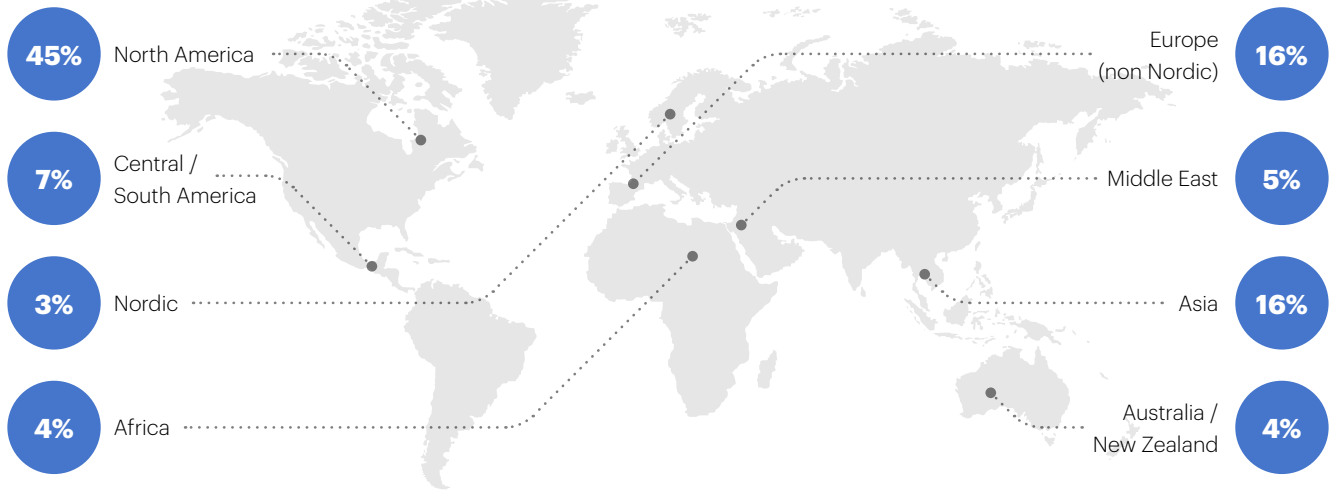
Which of the following most closely represents your role within your company's Process Excellence/Operational Excellence program?

● Process Excellence/Operational Excellence consultant	**20%**	● VP/Director Business Excellence4	**4%**	● Black Belt (BB)	**2%**
● Head of Operational Excellence	**9%**	● Manager/Director BPM	**4%**	● Green Belt (GB)	**1%**
● Head of Operations	**8%**	● Master Black Belt (MBB)	**3%**	● Business Process Analyst	**1%**
● Manager/Director Business Excellence	**8%**	● CIO	**3%**	● IT Executive	**1%**
● Manager/Director Business Transformation	**7%**	● Quality/Deployment Leader	**2%**	● Head of Transformation	**1%**
		● Business/Enterprise Architect	**2%**	● Other	**17%**
		● Process Owner	**2%**		
		● Head of Transformation	**2%**		

STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

Which department is responsible for Process Excellence/Transformation?

●	Operations	**23%**
●	Process Improvement Department	**18%**
●	Center of Excellence	**14%**
●	Individual Business Units / Departments	**12%**
●	Quality	**10%**
●	IT	**7%**
●	Human Resources	**3%**
●	Engineering	**2%**
●	Other	**12%**
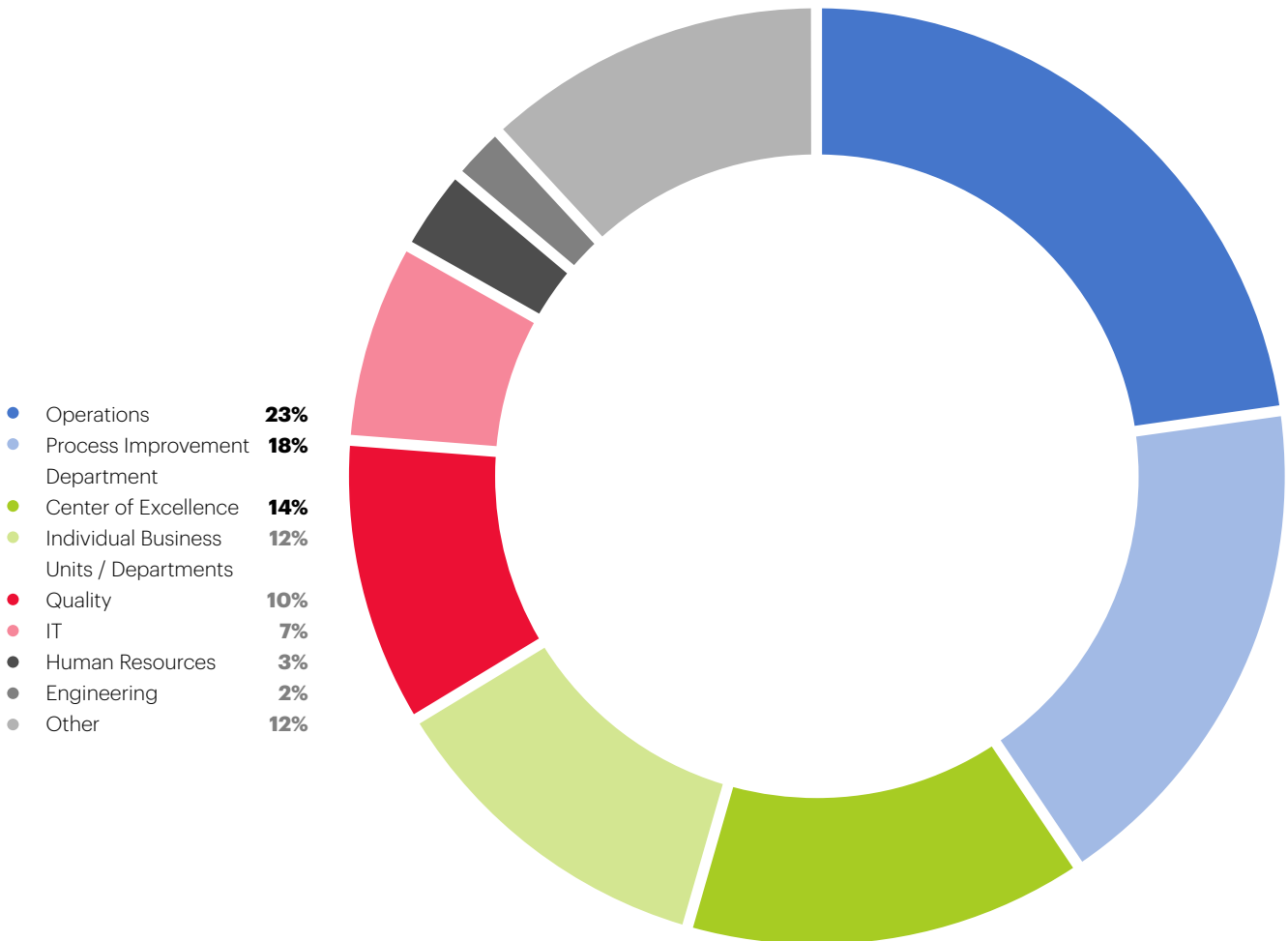
PEX: Operations and Process Improvement are in the top spots as usual – but there's a growing trend for businesses to have a Centre of Excellence.

Rohan Bhattacharjee - It is essential not only to define the core 'services' of the Business Process CoE, but to also define them in a manner that they are mutually exclusive, in order to be able to measure the performance of each service individually within the Business Process CoE.

The 'Service' description should be detailed enough to clearly call-out the specific activities that will form a part of the service. Each and every core 'Service' should have certain essential elements defined for them before they can get operational.

Dan Morris - The goal of the CoE is to deliver actionable change recommendations and to manage and/or govern change projects in the company.

These people are not necessarily experts in your business operation. They should not impose their points of view and dictate solutions. They are experts in change at all levels and in everything that change entails. But, they are not HR experts, or IT SMEs or financial experts etc. They do however, understand all these areas and when and how to get the right SMEs involved.

In this way the CoE consultants act as the orchestrator to ensure that the right skills in each group are applied when needed to create the best solution and solution roadmap possible.

STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

Which term best describes what your company calls process/operational excellence?

23%	**20%**	**16%**	**9%**
Continuous Improvement	Operational Excellence	Process Improvement	Process Excellence
9%	**8%**	**6%**	**4%**
Business Process Management (BPM)	Performance Excellence	Business Transformation	Lean
3%	**1%**	**1%**	
Lean Six Sigma	Change Management	Six Sigma	
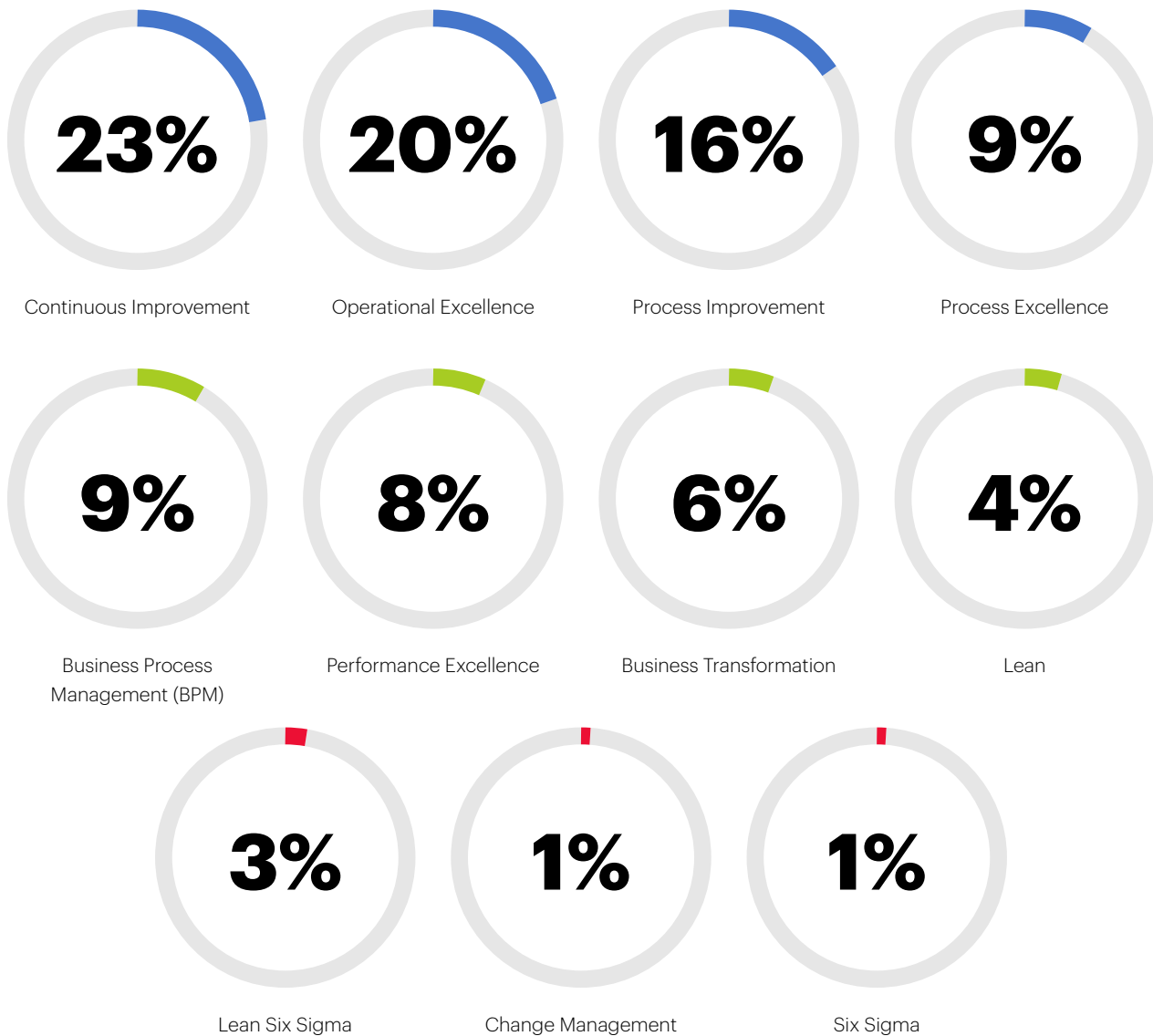
PEX: Companies are continuing to use broad terms to describe Process and Operational Excellence – which makes the concept understandable to everyone in the organisation. Everyone can do a process excellently, but perhaps lower down the hierarchy fewer people feel that they have the power to engage in 'business transformation'. 'Six Sigma' is the lowest of all – unsurprisingly as it's not immediately obvious to non-experts what it means.

Paul Swift - Based on my personal scars and experience, any excellence or improvement activity is 20% about the tools and 80% about the people and it is people that determine the sustainability. So, what determines whether improvements 'stick' or not? The beliefs, behaviour and actions of individuals all form part of the make up of the 'culture' of an organization and it is this 'Culture' that determines the sustainability of your Lean Six Sigma project, Program or Transformation.

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STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

What do you see as your primary process/operational excellence challenge for the year ahead?

- Linking process improvement with top level business strategy **40%**
- Sustaining change **30%**
- Ensuring a customer-centric focus throughout the business **22%**
- Overcoming too much short-term focus **22%**
- Deploying new technologies **21%**
- Overcoming resistance **20%**
- Securing executive buy-in **16%**
- Cost/budget limitations **15%**
- Maintaining executive buy-in **13%**
- Lack of alignment between business and IT departments **12%**
- Skills shortage **10%**

Brandon Brown, VP, Global Technical Field K2: Linking improvement to top-level business strategy remains one of the primary challenges. However, as process tools get better and the adoption of low-code platforms grows, we are seeing more people able to make a positive impact on process excellence. Organizations don't have a skills problem to innovate as shown. In fact, employees with the right tools and empowerment are implementing better operational change at the ground level through grassroots efforts. We see this all the time with our customer base. The organizations where executives realize this and promote throughout the company are the ones having the broadest process impact. Process excellence is defined not just by improving a handful of mission critical processes, but also by allowing businesses themselves to improve their team's or department's process challenges at scale.

PEX: Again, 'Linking process improvement with top level business strategy' is a top challenge for businesses, down slightly on last year (41%). Sustaining change is still in second place. This paints a picture of businesses trying to fit process into the strategy of an organisation, and getting those changes to stick when they are rolled out. Internal communication – of what a business is trying to achieve, and how improved processes will help – should be a priority for overcoming these challenges.

Thale Fonkalsrud, Leader of CoE Robotics: I think in the years to come, process automation will be a broader term, involving machine learning and artificial intelligence, but at least for 2019 it will still mostly mean RPA. None the less, it is a power full tool that will remove the simpler tasks.

In my company, which has been working with RPA for little more than a year we already see that we are challenged with providing training for the staff that used to do the simpler tasks which are now done by robots. If we do not get this right, the effectiveness that we think we are receiving, will not be given back to the business if the result is that the staff do not get more things done. This is also a delicate matter as it is not easy to tell your boss you do no longer know how to do your work, so it is of utmost importance, that this training or competence change is done right. We believe that there is much to gain from providing training and reskilling for the staff you already have, instead of only bringing in new people. Think of all the 'background information' your staff holds. The condition must be that the employees accept and embrace the training, but they may need help to understand why this is necessary.

One can only hope that top rank option in question 8, Leadership and Culture Strategy, will mean that business is taking this seriously.

STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

What types of process improvement work will be the focus of your program in 2019-2020?

Leadership and Culture Strategy	**43%**
Process Automation	**42%**
Process Redesign Work	**38%**
Change Management Strategy	34%
Customer-centric Process Management	32%
Integrating Data into Process (i.e "Process Intelligence")	31%
Redesigning Performance Metrics	28%
Six Sigma Process Improvement Projects	26%
Aligning Processes & IT	25%
Implementing Business Dashboards	23%
End-to-End Process Architecture	23%
Implementing Process Management Frameworks	23%
Process Modelling/Documentation	20%
Restructuring/redesigning the organizational chart	9%
Business Process Outsourcing	9%
Other	3%

PEX: Leadership and culture strategy and automation are the two top responses. We've heard so much about automation – and sure enough, it is going to be a major focus for the coming 18 months. But while we're talking about the robots taking over, there is still a lot of attention being paid to the human side of the business – human leadership and human culture.

Thale Fonkalsrud, Leader of CoE Robotics – Process automation is ranked second, with 42%. This means that more and more people within an organization will have time to do other work as their daily work is reduced.

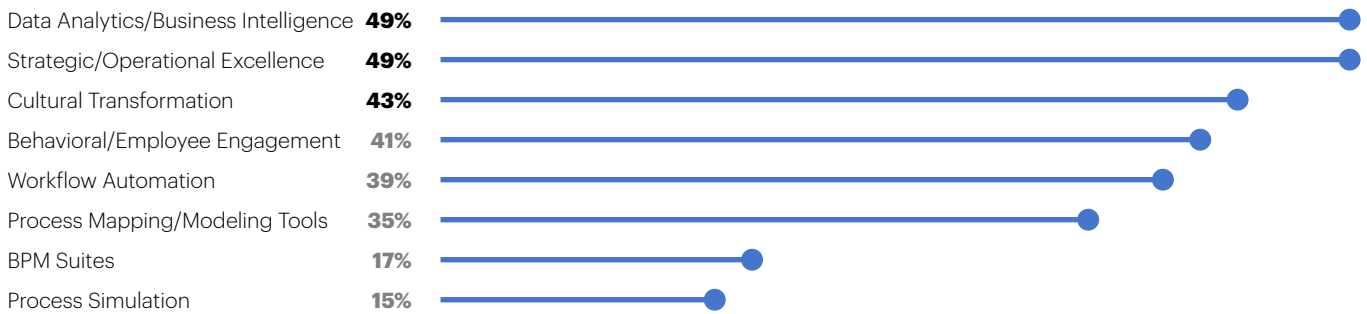**What are the 3 main strategies your company has to drive successful cultural change?**

LEAN ROI Visualisation Process measurements
Align resources Excellence Enforcement
Education IOT Corporate culture KPIs
Standardisation Engagement Executive buy in
Data analytics CORE VALUES Driving digital
RPA INNOVATION Continuous Improvement
Team building Agility Technologies
Lean-Six Sigma Scrums MANAGE CHANGE

STATE OF THE INDUSTRY:
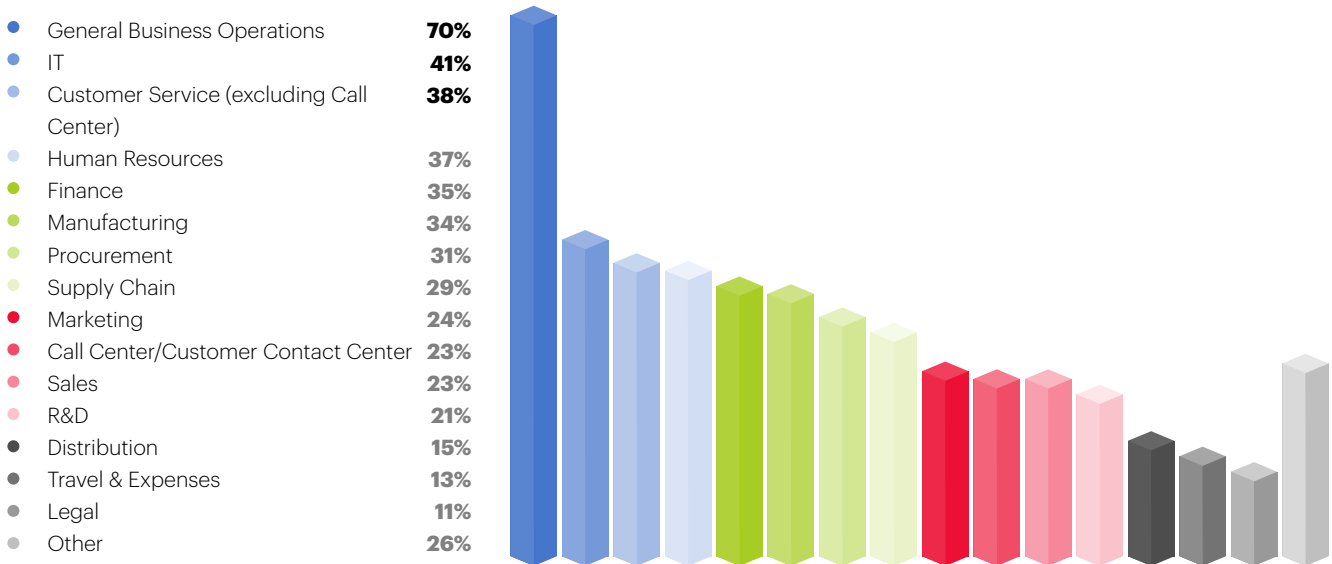
ABOUT THOSE SURVEYED - Process Excellence Survey 2018

What management solutions are you looking to invest in to drive your operational excellence projects over the next 12 months?

Data Analytics/Business Intelligence	**49%**
Strategic/Operational Excellence	**49%**
Cultural Transformation	**43%**
Behavioral/Employee Engagement	**41%**
Workflow Automation	**39%**
Process Mapping/Modeling Tools	**35%**
BPM Suites	**17%**
Process Simulation	**15%**

PEX: Data Analytics has crept up from 43% in 2015 to 44% in 2017 – and is now at 49%. This points to a boom in available data, and the tools with which we can make use of it. Employee engagement is up 5% from last year, which suggests that businesses may be taking steps to look after millennial workers whose (undeserved?) reputation for disloyalty is something we'll be looking at later in this report.

In which functions of your business are you applying operational excellence methodologies?

● General Business Operations	**70%**
● IT	**41%**
● Customer Service (excluding Call Center)	**38%**
● Human Resources	**37%**
● Finance	**35%**
● Manufacturing	**34%**
● Procurement	**31%**
● Supply Chain	**29%**
● Marketing	**24%**
● Call Center/Customer Contact Center	**23%**
● Sales	**23%**
● R&D	**21%**
● Distribution	**15%**
● Travel & Expenses	**13%**
● Legal	**11%**
● Other	**26%**

From a scale of 1 - 10 how would you rate the success of your operational excellence programs?

1	2	3	4	5	6	7	8	9	10
2%	1%	3%	5%	14%	21%	27%	21%	5%	3%
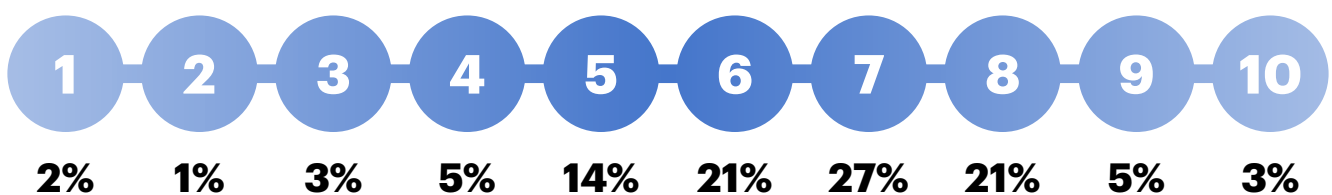
STATE OF THE INDUSTRY:

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What skills do you think will be most important in achieving OPEX over the next five years?

TRUST   BPM   Change   Process Initiatives
Lean program   IOT   Business continuity   Respect
Workflow Tools   Engagement   Inter personal skills   ROI
Data analytics   SOFT SKILLS   Data analytics   ROI
Behavioural acceptance   Continuous Improvement
Culture Transformation   Execution
Data Science   OPEX METHODOLOGIES
Critical thinking   MENTORING   Digital innovation skills
Six Sigma   Technical Knowledge   GENERALISTS VS SPECIALISTS   WORKFORCE INVOLVEMENT
Patience   KATA   Customer Awareness
Engage   Sustainability   Systems Thinking
AI & RPA   People Upskilling   TRUE LEAN

How many people work full-time in your process improvement program or projects? (including centralized and decentralized employees)

0-10	10-50	50-100	100-200	200+
55%	29%	2%	4%	10%
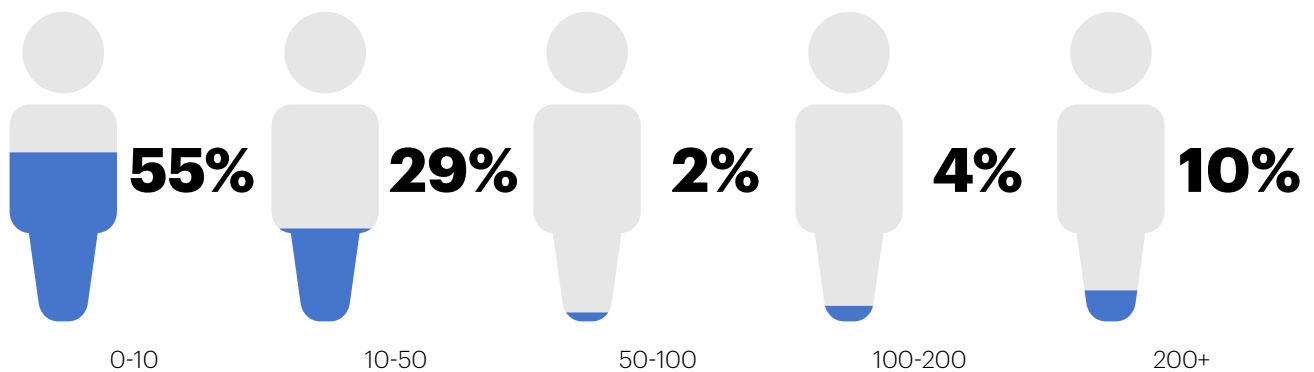
PEX: An overwhelming majority of businesses occupy the bottom two categories – as we found out from Adrian Ruth at a PEX event this year, the BBC employs over 20,000 people, and their Process Excellence team (called 'Spark') consists of 16 staff. A little can go a long way.
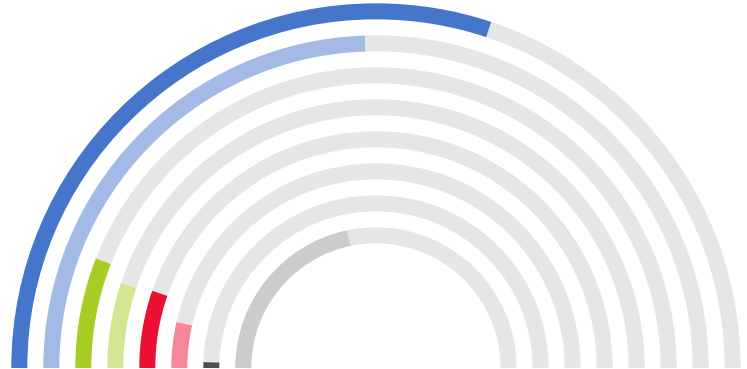
STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

Who in your C-Suite owns process excellence?

- Chief Operating Officer   **30%**
- Chief Executive Officer   **24%**
- Chief Information Officer   **7%**
- Chief Strategy Officer   **6%**
- Chief Transformation Officer   **6%**
- Chief Financial Officer   **4%**
- Chief Digital Officer   **1%**
- Other   **22%**

PEX: While the top spots here have remained unchanged, a development in the middle of the pack may be a sign of things to come: Chief Information Officer has gone from 4% in 2017 to 7% this year. As robots and AI become more ubiquitous, is the CIO's role changing to reflect the growing influence of smart technology over the workplace?

Andrew Spanyi, Advisor at Association of BPM Professionals International: In theory a process owner is a senior manager with clout, while in practice a process owner is most frequently a middle manager without much clout or influence. This is partly because process ownership has been co-opted by traditional functional thinkers such that the role of process owners has become substantially different than what was originally intended.
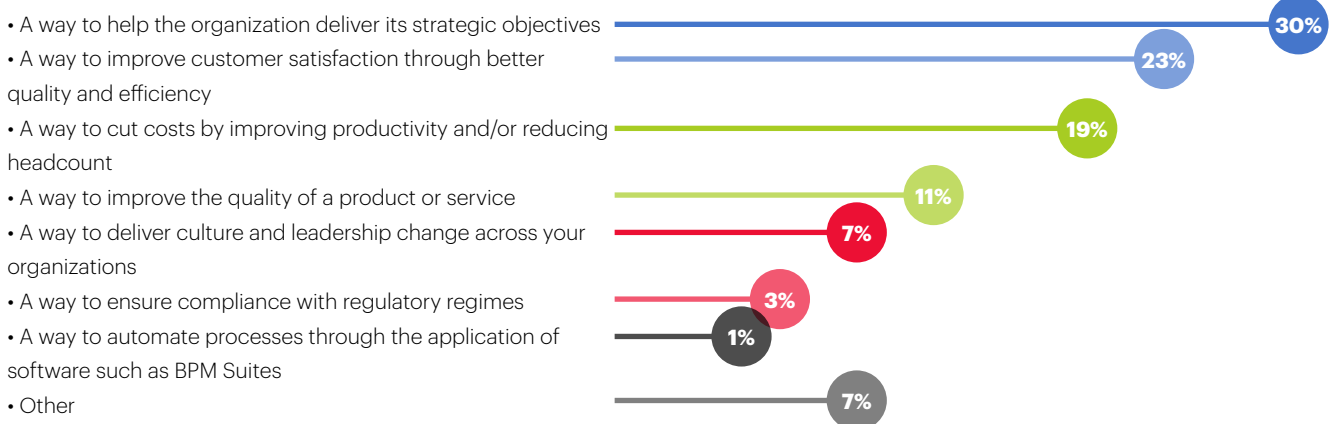
Just consider how process owners are appointed: 1: a lean six sigma black belt advocates the appointment of a process owner to 'control' a process that has been improved through DMAIC. 2: the system integrators for an ERP implementation recommend that middle managers be appointed for so called end to end processes such as order to cash, procure to pay, and hire to retire. And once in a while, 3: some senior executive 'gets religious' around process and appoints a middle manager to 'own' a process.

While the appointment of process owners in any of these three ways has the potential to end up with a focus on improving the customer experience through enterprise wide process orientation – it rarely does.

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Which of the following best describes how your company views the process excellence/operational excellence function?

- A way to help the organization deliver its strategic objectives — **30%**
- A way to improve customer satisfaction through better quality and efficiency — **23%**
- A way to cut costs by improving productivity and/or reducing headcount — **19%**
- A way to improve the quality of a product or service — **11%**
- A way to deliver culture and leadership change across your organizations — **7%**
- A way to ensure compliance with regulatory regimes — **3%**
- A way to automate processes through the application of software such as BPM Suites — **1%**
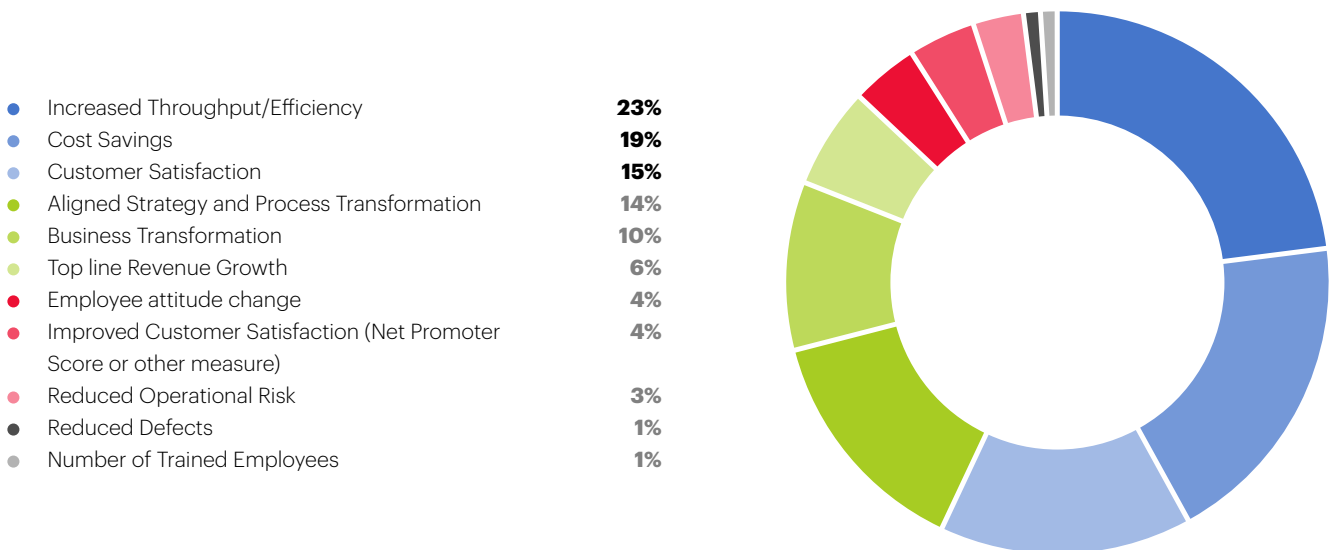- Other — **7%**

PEX: The top three spots, within a couple of percentage points, remain unchanged from last year.

STATE OF THE INDUSTRY:

## ABOUT THOSE SURVEYED - Process Excellence Survey 2018

What is your primary measure of success for your Process Excellence program?

● Increased Throughput/Efficiency	**23%**
● Cost Savings	**19%**
● Customer Satisfaction	**15%**
● Aligned Strategy and Process Transformation	14%
● Business Transformation	10%
● Top line Revenue Growth	6%
● Employee attitude change	4%
● Improved Customer Satisfaction (Net Promoter Score or other measure)	4%
● Reduced Operational Risk	3%
● Reduced Defects	1%
● Number of Trained Employees	1%

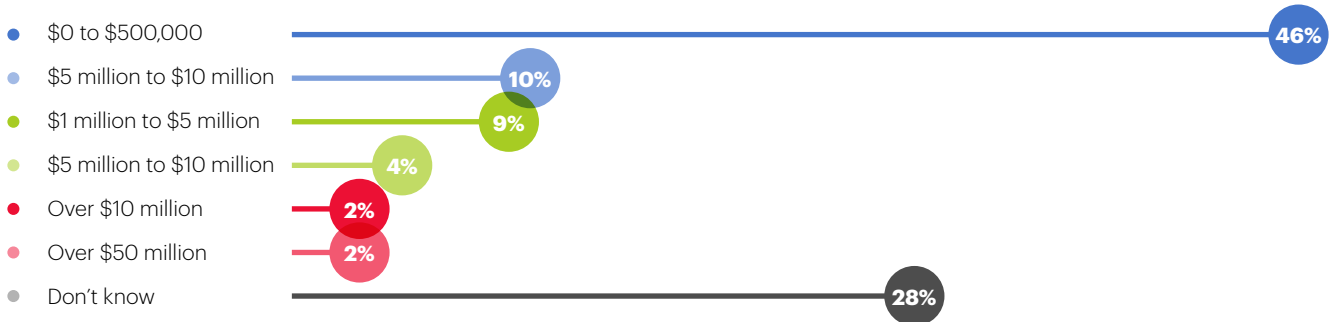**PEX:** 'Increased throughput and efficiency' has taken over from last year's number one – 'cost savings'. This may reflect that RPA has changed the environment, and that businesses are able to produce more with the same resources.

In 2019, is the number of people employed full-time in process improvement in your company is expected to:

Increase **42%**   Remain the same **46%**   Decrease **3%**   Don't know **8%**
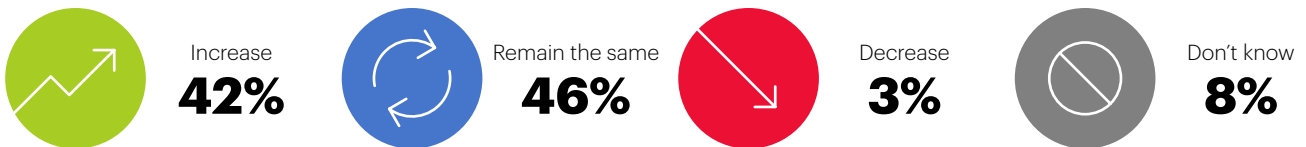
PEX: Virtually unchanged from last year, though 'remain the same' has edged ahead slightly. Perhaps this is the year that investment has been made, and the spending won't change until the results are in?

What is the annual budget for investment in operational excellence next year?

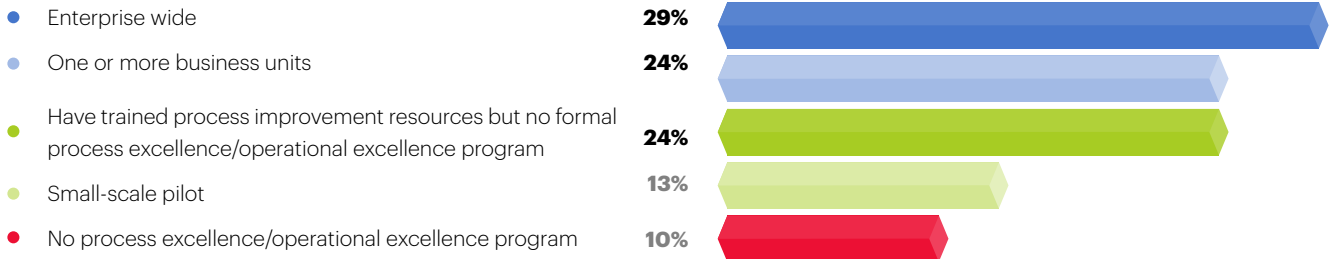|	
● $0 to $500,000	**46%**
● $5 million to $10 million	**10%**
● $1 million to $5 million	**9%**
● $5 million to $10 million	**4%**
● Over $10 million	**2%**
● Over $50 million	**2%**
● Don't know	**28%**

PEX: These numbers haven't shifted significantly from previous years – though as we look at the increased numbers of SMEs in the PEX Network, it does look likely that investment in Operational Excellence is something that businesses are taking on board earlier in their lifecycle.

STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

Which of the following best describes the current scope (in 2018) of the Process Excellence/Operational Excellence deployment at your company?

- Enterprise wide — **29%**
- One or more business units — **24%**
- Have trained process improvement resources but no formal process excellence/operational excellence program — **24%**
- Small-scale pilot — **13%**
- No process excellence/operational excellence program — **10%**

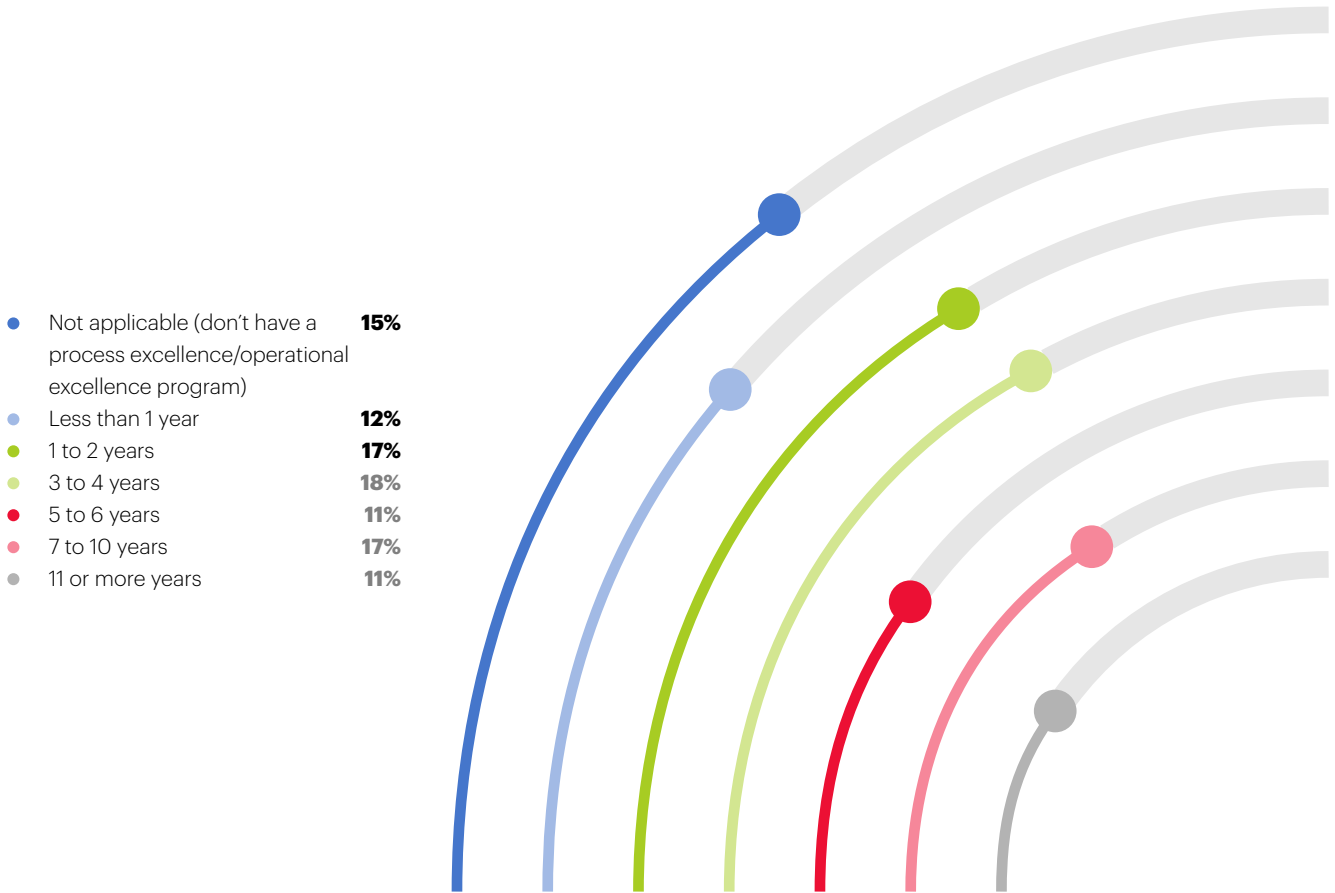**Which methodologies and solutions are you currently using to support your operational excellence projects?**

	Currently Using	Plan to implement	Plan to discontinue
Business Process Management	67%	32%	2%
Enterprise Architecture	59%	32%	9%
Business Architecture	62%	30%	8%
Lean	75%	14%	11%
Lean Six Sigma	70%	21%	9%
Six Sigma	69%	17%	14%
Change Management Consulting	66%	25%	9%
Leadership and Culture Consulting	65%	26%	8%
Strategy & Transformation Consulting	68%	27%	5%
Robotic Process Automation	32%	62%	5%
Artificial Intelligence	23%	69%	7%
Business Process Re-engineering	61%	32%	6%
Total Quality Management	57%	30%	13%
Process Excellence Frameworks (E.g. Baldrige, APQC, EFQM)	52%	33%	15%
Total Productive Management (TPM)	53%	31%	16%
Agile	64%	26%	9%
ISO	66%	23%	11%
Hoshin Planning	43%	33%	23%
DFSS	40%	30%	31%
Dynamic case management	32%	34%	34%
Project Portfolio Management	65%	26%	8%
Other	45%	20%	35%

Brad Ellis, Mimeo: I believe that technology can be an enabler of continuous improvement. We have a combination of industrial and software engineers to make constant improvements to our selection of processes. Once the process is selected, the software engineer will come in behind them and automate it. It's really about reinforcing the change in a more automated way after it's been implemented.
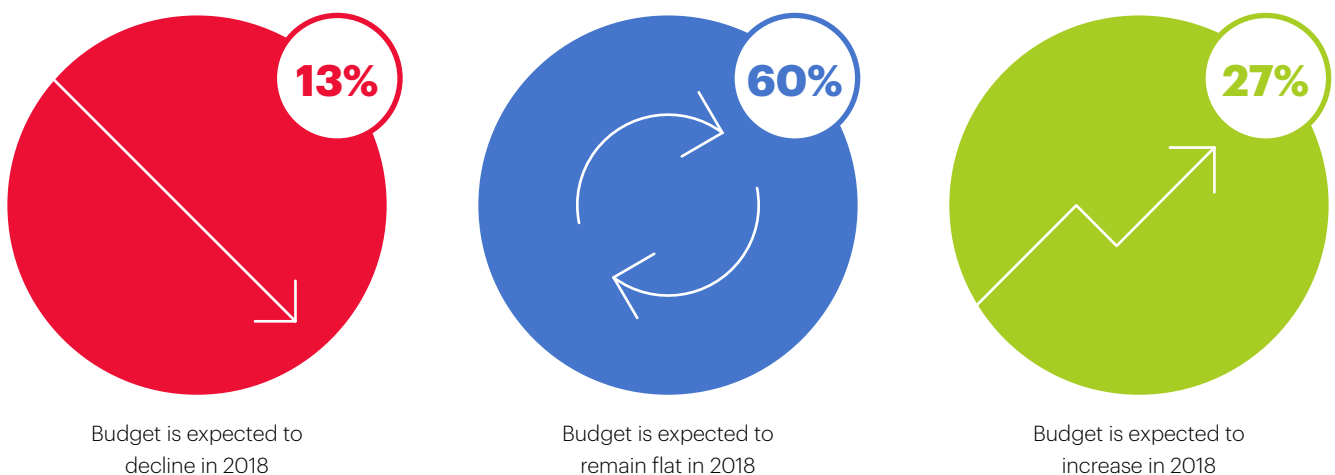
STATE OF THE INDUSTRY:

ABOUT THOSE SURVEYED - Process Excellence Survey 2018

How long has your organization had a formal process/operational excellence program?

- Not applicable (don't have a process excellence/operational excellence program) **15%**
- Less than 1 year **12%**
- 1 to 2 years **17%**
- 3 to 4 years **18%**
- 5 to 6 years **11%**
- 7 to 10 years **17%**
- 11 or more years **11%**

PEX: A fairly even spread of responses here. Smaller, younger companies may be skewing the answers here a little towards the bottom of the scale.

Which statement best describes the effect the economy is having on your operational excellence program budget?

13% Budget is expected to decline in 2018

60% Budget is expected to remain flat in 2018

27% Budget is expected to increase in 2018

STATE OF THE INDUSTRY:
ABOUT THOSE SURVEYED - Process Excellence Survey 2018

We asked for your bold predictions for the future of PEX – and here is a selection of answers from survey respondents of every size and sector.

A failure to maintain business continuity and identification of sustainable development targets will cause the failure of multiple projects thereby missing current OPEX targets and causing an effect to the bottom line. Overall however is that it will catch on to a greater extent and will result in organisations understanding the need for Enterprise Risk Management and Business Continuity Management principles resulting in improved businesses and localized improvement in domestic GDP.

'The future is about reducing bureaucracy.'

'I believe there is a surge in organisational awareness especially in Africa for the need to smartly control operational costs, while forced by economical instabilities always carefully scrutinise potential operational risks. This then becomes a circumstantial bold embrace and growth of OPEX.'

'The companies that are not willing to change to get more efficient will be obsolete in few years.'

'We will begin to prove that we are better leaders than previous generations.'

'PEX will thrive in the next financial crisis.'

'Erratic performances as millennials assume management positions and skilled OPEX practitioners retire. Only companies that can mentor new associates and pass on historical methods will survive.'

'I can see OPEX gaining a mandatory space in every business by the next few years because of the intense market competition.'

'It is the equivalent of the industrial revolution. The workforce of the future will operate very differently and more efficiently. We moved from using quills and ink to write and communicate to the printing press, emails/text etc. The new world will be a symbiotic relationship of human and bot communication which will change the way we live, work, play and evolve.'

'The relatively inexpensive but nimble small players in the BPM software market will surpass the popularity of the "big guys" with their complicated, inflexible, expensive BPM tools.'

'Operational Excellence will continue to expand its reach into the Digital space. It is inevitable that solutions to our most challenging business issues will be a blend of great process thinking, IOT applications for robust insights, and robotic automation applications to free up time so our people can focus on what is important. The key is to have a clear strategy to get there that fosters collaboration and clear engagement models without forgetting our Operational Excellence roots, skills, and methodology.

CONCLUSION

There are three major questions that this report helps to answer.

1 What is technology doing to the workplace?

Technology is having a significant impact on our places of work – and there's no getting away from the fact. Organisations that eschew technology are going to find themselves quickly overtaken by those who are making use of the tools available, and the ones who are making the best use of the tools are going to be leading that pack.

The advantages of agility and innovative use of technology mean that even the largest businesses of all have vulnerabilities. Complacency is not an option.

2 Where do the humans fit in?

The idea that AI is pushing human beings out of the picture is false. If robots are being brought in with the sole intention of reducing headcount, they have been a total failure; instead they have delivered on speed, accuracy and effectiveness.

Humans are still necessary to make decisions, and while there are humans in an organisation, leadership will remain a human activity. People can't be reprogrammed as easily as a machine, and the old rules of leadership – integrity, vision, imagination, inspiration – are not yet something we can hand over to a robot.

Technology offers opportunities, but they are opportunities that look very different to what we've seen in the past.

3 What are we going to need for the future?

Future success depends upon the groundwork being laid now. The best time to plant a tree is twenty years ago, but the second-best time to plant it is right now. One of the clear signals from this research is that a greater understanding of technology is key to better business performance.

Technology is transformative; issues like blockchain, robotics, artificial intelligence and the like are not just 'better mousetraps'; they are fundamentally changing the way businesses compete and collaborate. It has already fundamentally changed our culture, with Millennials working their way into boardrooms around the world, and the next generation hot on their heels.

Understanding – of the technology and ourselves – is going to put businesses that 'get it' at a major advantage.

We're always being told that the future is exciting. I think the present is pretty exciting too. We're smart to think about building the future today, planting that tree right now, but I think there are opportunities and discoveries waiting to be had today.

> **Read on for features that are going to tackle these issues head-on.**

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HOW WILL BLOCKCHAIN REVOLUTIONISE BUSINESS PROCESS MANAGEMENT?

Roop Singh and Ian Hawkins

If you've ever read Adam Smith's The Wealth of Nations (1776), you'll know that Business Process Management is older than the United States of America:

'A workman not educated to this business ...could scarce, perhaps, with his utmost industry, make one pin in a day, and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades. One man draws out the wire; another straights it; a third cuts it; a fourth points it; a fifth grinds it at the top for receiving the head; they could, when they exerted themselves, make among them about twelve pounds of pins in a day. Those ten persons, therefore, could make among them upwards of forty-eight thousand pins in a day. Each person, therefore, making a tenth part of forty-eight thousand pins, might be considered as making four thousand eight hundred pins in a day. But if they had all wrought separately and independently... they certainly could not each of them have made twenty, perhaps not one pin in a day; that is, certainly, not the two hundred and fortieth, perhaps not the four thousand eight hundredth, part of what they are at present capable of performing, in consequence of a proper division and combination of their different operations.'

So, for all the BPM software that we throw at our organizations today, have things really changed over 200 years? Adam Smith identified the division of labour and then their combinations of their different operations - as the number one way of exponentially increasing the output of a factory; and we know that whether we're building a car or making cupcakes for a summer party, an extra pair of hands, properly deployed, can increase our output – not by halving our labour, but by making our labour more productive. Isn't that what BPM, at heart, does? Small businesses often start out with a team of multitaskers, but a business doesn't have to grow so large that the CVs of the payroll clerk and the head of sales look very different. You certainly wouldn't expect them to cover for each other, except in the most dire of circumstances. This led to a division of labour, evolving into often siloed or department-oriented approach, rather than a process-oriented approach. BPM as a discipline has long sought to reach this goal of process efficiency and effectiveness.

Roop Singh

Roop is an authority on Digital Transformation, Distributed Ledger Technology and Blockchain Architecture and an AI Enthusiast. He is and experienced business transformation leader, trainer, and speaker with demonstrated proficiency in designing blockchain use cases and business models, architecting blockchain solutions and dramatically improving business processes to increase revenue, reduce cost, and deliver service excellence

Ian Hawkins

Ian has worked in trusted positions with high profile individuals and major companies. He has produced films about businesses for SMEs and blue chip companies on locations including Managua, Panama and Gothenburg.

As well as scripting television and radio, Ian's live event experience led to writing an acclaimed book, Insider Secrets of Public Speaking, running communications workshops on both sides of the Atlantic and coaching politicians, Olympians and CEOs on public speaking and crisis communications.

Ian's passion is helping businesses of all sizes understand how technology and communication can give them a competitive edge, and how personal change can drive transformation in the wider world.Today he is Editor of PEX Network for IQPC, bringing the latest business news to a global audience of C-suite leaders and decision makers.

Robotic Process Automation is a recent branch of the evolutionary tree: as we might divide labour so that people do the tasks best suited to them as individuals, we are beginning to assign tasks to computers that had previously

HOW WILL BLOCKCHAIN REVOLUTIONISE BUSINESS PROCESS MANAGEMENT?

Roop Singh and Ian Hawkins

been done by humans – and finding that the robot helpers are making very light work of many of the key processes are liable to be repetitive and prone to error when done by humans. Automation frees up humans to perform more complex activities. Where BPM is a functional discipline, RPA is a technology implementation advancement.

The objective of BPM, whether you work it out on a smart piece of bespoke computer software or shuffle pieces of card around on the boardroom table, hasn't changed that much: it's essentially about gaining process efficiency and effectiveness.

How companies can apply these methods, techniques and principles remains varied and hence determinant of their success.

As such, Adam Smith might quickly find himself at home with some of the concepts of BPM, and potentially even the more user-friendly products on the market (not to mention intrigued by the possibilities of our portable touch-screen analytical engines).

And then there came along blockchain.

Blockchain has been most conspicuous for the lottery-win type dividends that have made the headlines for 20-something investors in cryptocurrencies. But there is more to blockchain technology than making a few early adopters wealthy. What is the potential of blockchain beyond filing the pockets of the nouveau ultra-riche?

The word 'blockchain' is a shorthand for a particular type of distributed ledger technology. In a public permissionless blockchain like Bitcoin or Ethereum, every node of the network has visibility over the whole. Think of friends meeting for coffee:

Adam: *I'll get your coffee, Barbara, because you got mine last week.*

Barbara: *Thank you, Adam!*

Clive: *I've left my wallet at home... Adam, could you get mine as well?*

Denise: *Oh, same here! Sorry Adam!*

Adam: *Look, I'll just buy everyone's coffee...*

Edward: *I'll tell you what, Adam – I still owe you $15 from last week. I'll get these and we're square, ok?*

The waiter takes a single payment from Edward, and although nobody would call it 'blockchain', that's exactly what it accomplishes: the participants of the network have kept track of all the transactions.

The difference is that a blockchain – with its blocks of transactions, lives on computers rather than in the memories of your friends who might remind you this is the third week in a row you've 'left your wallet at home' and maybe it's time you got the drinks.

It's the same with Bitcoin: there is no central bank issuing currency. By using the blockchain and military grade encryption to create Bitcoin, the digital currency solved the double-spending problem – i.e. not being allowed to spend the same digital money twice – without having to run it by a trusted central authority, just as you don't need the bank's seal of approval every time you hand over cash in a shop.

Blockchain's implementation as Bitcoin - a peer-to-peer digital cash avatar - is an article in itself, yet it is not the only use of blockchain. Let's focus on the non-monetary uses of blockchain for a moment. Here's a simple example of how it can help protect intellectual property:

Let's call the article you're reading right now 'Version A'. Now imagine that another publication decides to pad it out a bit with some more reporting and interviews for their journal, and publish what we're going to call Version B. This is then translated into Spanish (Version C) and published overseas. Before we get too involved in different versions, we can see this whole transaction is starting to operate a bit like a blockchain: each iteration of the article is unchanged, and we can see how it is built on in subsequent iterations. In practical terms, what does this mean? If you have a journal of your own, wish to re-publish the article, and want to pay the people who wrote it, you know immediately where to send the money, depending on which version you're going to publish:

HOW WILL BLOCKCHAIN REVOLUTIONISE BUSINESS PROCESS MANAGEMENT?

Roop Singh and Ian Hawkins

Version A: the original authors
Version B: original authors, plus the editor
Version C: original authors, editor, and translator

Each version of the article does not change the previous version. This is immutability and is a core concept which we'll come to later.

As we enter the world of blockchain - two key terms to introduce at this point are protocol and encryption.

Going back to our coffee shop friends, the transactions are following certain rules or protocols: they are all using the same currency, for example. We might say that other rules are that the amounts of money being discussed are quite small, and whatever other financial arrangements might be going on between the friends, what happens in the coffee shop, stays in the coffee shop.

All blockchains have some level of encryption: if our friends happen to be working out who pays what, in sign language, the information could be said to be encrypted (we assume the waiter doesn't know sign language – unless he's a hacker). We might also say this is a private permission-based blockchain as it only exists between the group of friends – a stranger couldn't walk in and ask Edward to pay for her coffee too.

A blockchain, then, can be open to some, and restricted to others. There will be agreed upon rules or a protocol, to participate in the network and to access data.

So that's what a blockchain is. Why would different companies need to use it for something like BPM?

Let's imagine Adam Smith is at our shoulder and we are having to explain it to him. We'll use his own process for pin making as a springboard. Here it is, highly simplified:

As Adam Smith noted, giving a separate task to each person makes the whole system exponentially more efficient. How may blockchain be applied to this?

Let's imagine that we're not just talking about five different individuals making the constituent parts of a pin, but five separate companies. Without every part of the system working together, there is no pin at the end, no product, and therefore, nobody getting paid. It helps if everyone works together.

> **'A blockchain can be open to some, and restricted to others. There will be agreed upon rules or a protocol, to participate in the network and to access data.'**

Let's imagine that the price of steel from which the wire is drawn fluctuates so much that it has a major impact on the profits of the manufacturers. This is a factor that can affect every company in the process, but only one company, the wire drawers, actually buys the raw material. On a day when steel is suddenly very cheap, the company drawing the wire is keen to buy as much as possible. Unfortunately, they don't have much money in the bank.

This is where blockchain might help.

Traditionally, the wire-drawers might have to go to the bank and ask to borrow more money. With a blockchain based lending platform, they can borrow money - or even other services - from the other businesses further down the line on a peer-to-peer basis.

As companies agreed to record transactions on the blockchain apriori, every company can see what the others

| Draw the wire | → | Straighten | → | Sharpen the tip | → | Grind the top | → | Attach the head |

HOW WILL BLOCKCHAIN REVOLUTIONISE BUSINESS PROCESS MANAGEMENT?

Roop Singh and Ian Hawkins

are doing – there can be no dispute that even though the steel in the tip-sharpeners' warehouse was paid for with the head-fitters' money, delivered by the top-grinders' lorries and belongs to the wire-drawers.

We can immediately see that blockchain has enabled these five companies to work together for their mutual benefit. Compare the otherwise identical pin-makers in the next town along who aren't on the same blockchain network and platform.

Our five businesses are working together to pool resources, including finance. Many small businesses find they are at the mercy of their banks when it comes to cash flow. Using a blockchain based network and platform, companies may loan each other funds with transparency. Could banks see value and join these networks as consortiums? Glad you asked, it's already happening.

This sharing of data with encryption means that quality of data is consistent, proprietary information is protected, and thanks to multiple points of verification, fraud is discouraged.

There is a clear motive for each part to work together for greater prosperity, and while Bitcoin has got everyone excited about the money, the real commodities here are data and trust.

'Blockchain is just a glorified database. What's the big deal about it?' That's a common refrain from people who still like to view things from a computing paradigm that rightfully brought us to this stage of evolution.

Blockchain is a 'shared encrypted ledger with a shared state' meaning all the participants have the same data and the same point of time. This is unlike databases connected via systems, in which one has to reconcile the data often. As we now start to see why blockchain is preferable to a standard database.

Clearly, while a database can be changed posteriori, by the custodian of the database, the information on a blockchain is immutable. A database is a snapshot of a moment individually, while a blockchain is a snapshot of a moment in the data's journey- shared by everyone. So, it tells you about the journey up to that moment.

A database may be untrustworthy; yet when two parties join up and share a common state of the data using secure manner, they have the makings of a blockchain.

Remember the three versions of this article (A – original; B – edited; C – translated)? A publisher reads Version C and thinks it is brilliant (it could happen). A database might say that this was written by the translator, rather than the original authors – and it would be a mistake to expect the translator to write another article on blockchain. Likewise, it would be a mistake to think that the original authors could translate an article into Spanish. Understanding who came on board the project at what stage of the process from authorship to editing and finally translation is useful data. If the publisher wants another article, a contributing editor, or a Spanish translator, an audit of the blockchain will point them to the right person more reliably. A blockchain based platform, can be used to establish intellectual property rights, credits and even associated royalties (using smart contracts, more on those some other time).

> **'Many small businesses find they are at the mercy of their banks when it comes to cash flow. Using a blockchain based network and platform, companies may loan each other funds with transparency. Could banks see value and join these networks as consortiums? Glad you asked, it's already happening.'**

HOW WILL BLOCKCHAIN REVOLUTIONISE BUSINESS PROCESS MANAGEMENT?

Roop Singh and Ian Hawkins

When does it make sense to use blockchain? Data and trust are the key concepts here, and you might find it useful to think back to the analogies given above as we discuss these ideas. Blockchain is really a system of formalising the movement of data and trust between parties.

Authenticity

Immutability: Transactions published on the blockchain are immutable, meaning they cannot be erased or changed. Auditability: This allows us to go back in time and being able to audit and review those transactions.

So, when it's needed to be certain that the transaction is authentic, has not be been and cannot not be tampered with, use of blockchain is highly effective. In this effect, it differs from the use of centralized owned and centralized stored databases.

Decentralization:

As Steven Johnson argues in the New York Times article *'Beyond the bitcoin bubble'* - The roots of the internet were decentralized, i.e. no one entity or set of entities directs or controls what everyday users experience on the internet. Somewhere along the last 20 years or so we have developed business models and applications that gives a lot of influence to a select few companies, namely Google, Facebook, Amazon, Twitter, Instagram, WhatsApp.

Public blockchains bring with them an egalitarian perspective of a community of people setting up nodes, participating in the network for the benefit of the network. This leads to three experts in different fields contributing to a Wikipedia article, for instance, or a dozen different companies producing and then tracking components for a car.

Furthermore, distributing data storage over a network rather than storing it on a centralized database removes the single point of failure for data compromise. Recent headlines about data breaches at companies such as Equifax, Home Depot and Target have been damaging to those brands, and left each organization with the problems of cleaning up the mess. Imagine, if they had distributed their data and secured it on a blockchain, their hacks might not have been so impactful.

Wherever there is a need to secure data or to remove single point of failure, think: would encrypted storage using a blockchain be useful?

Disintermediation

This is a long word for streamlining your process: disintermediation is reducing your reliance on intermediary middlemen. Our coffee drinkers make small payments directly to each other rather than via a bank, for example.

Proof of Ownership

Given the properties of immutability and auditability, blockchain offers the best yet technology to establish 'proof of ownership' of any assets. Your car, house, stocks, art pieces, bicycle - even your diploma. Anything that can change in ownership is a good candidate for the use of blockchain to track the chain of custody of that asset.

Proof of Authorship

In the event of a dispute over payment, or a question from a reader, it's a straightforward matter to agree which author contributed what, and which author owes the reader an answer. Similarly, were an author to quietly remove the name of a co-author from a document and pass it off as solely their own work, the presence of a blockchain enabled platform would make any subsequent claim on royalties an open and shut case.

Automation

Blockchain, with its built-in consensus mechanisms, is essentially automation of complex business processes. In today's world, these processes are operated by disparate systems amongst various supply chain partners. Imagine a system for each company, and then further systems built to interact, share data and reconcile data over and over again. Now try to imagine the cost of all those transactions. Blockchain eliminates the need for the regular periodic reconciliation thereby reducing the transaction costs. It does this by implementing a consensus mechanism that simplifies creation of a single shared version of the truth. Here's an article about how that works:

Blockchain Beyond the Hype
A Practical Framework for Business Leaders

HOW WILL BLOCKCHAIN REVOLUTIONISE BUSINESS PROCESS MANAGEMENT?

Roop Singh and Ian Hawkins

Transparency

These above properties bring us to a central theme: transparency.

'We, the participants, of the network, believe this to be the single shared state of all the transactions in the network.'

This ease of creating transparency is the power of blockchain.

All of these finally lead us to Trust. Think about what happens when there's absence of trust. Think about the time, effort and resources we spend on establishing the intangible sense of trust. We're slowly, yet surely moving towards a new paradigm – 'Trust merely not in a company or an organization, but trust in the chain.' Trust in a trustless automated world. Trust underpins so much of what we value: collaboration, creativity, security. An absence of trust leads quickly to paranoia and paralysis. Blockchain, then, is truly an opportunity for entities of all flavours to be creative and collaborative, without the risk of losing data, intellectual property and digital assets.

> **'Trust underpins so much of what we value: collaboration, creativity, security. An absence of trust leads quickly to paranoia and paralysis.'**

Picture the inner workings of your company. Now bring into vision the urban sprawl of data, ERPs, home grown customized applications with a patch work of interfaces, middleware and customer portals. Now extend this vision into systems across all of your partners throughout your supply chain. That's the operational reality of today's incumbent corporation. Now imagine a streamlined automated process with all your network partners, sharing the same state of the data. That could possibly be the reality of tomorrow's corporation. As many transformational landscape changes, this one may not be a choice for some.

Conclusion

At the tactical level, Blockchain, beyond all its jargon, is a medium of process efficiency. It's the latest evolution in process automation and secure data sharing. Blockchain is Business Process Automation and Management. One may apply it within the boundaries of the organization, though it's much more potent and dynamic when the lens is much wider. At a strategic level, it's a medium of trust efficiency, enabler of new business models, facilitator of asset exchange and will usher in new markets. It'll even produce outcomes that we were promising with the now traditional BPM approaches and techniques. You might even ignore it, thinking it does not affect your industry today. The ones with that viewpoint, do so at the risk of becoming obsolete. Foundational evolution is technology has a way of doing that. You can either be a part of the shift ...or you can watch it happen.

JAMES BELLINI ON PAST, PRESENT AND TOMORROW'S WORLD

Dr James Bellini, Futurologist

No, I'm not a wizard – but I do have a weird habit of reading old futurology books, to see how right or wrong we were. The other day I revisited my book High Tech Holocaust, published in 1986, over thirty years ago. It charted a gloomy journey into the years ahead, of besieged populations beset by 'poisoned soils, poisoned bodies, a poisoned future'. How did I do? Frankly, though I consider myself a qualified optimist, I wasn't gloomy enough.

High Tech Holocaust didn't pull its punches about the state of planet Earth in the 1980s: the Chernobyl nuclear disaster; a massive chemical leak in Bhopal resulting in over half a million injuries and thousands of Indians dying in surrounding shanty towns; the Thalidomide pharmaceutical scandal still cast its ugly shadow; not to mention acid rain, pesticide poisoning, the hazards of contaminated and additives-adulterated food, drinking water tainted by toxic traces … The list was endless.

But did this depressing future come true? Well open a newspaper or catch a news bulletin in today's 'enlightened' world and the sense of déjà vu is overwhelming. From oceans – and marine life – choking on plastic, to increasingly polluted cities and a global food industry that manages to clock up billions of food miles carting foodstuffs across continents and wastes nearly £3 trillion of food a year through self-serving corporate strategies, wreaking havoc on our environment by catering to a public obsession with red meat.

I'm not a vegetarian, but beef production is a serious no-no in its impact on precious natural resources like water and energy, not to mention its enormous contribution to climate change. Seems to me the future of protein is with environmentally-friendly and nutritious insects, a low-impact solution that over 2 billion people worldwide have anyway favoured for thousands of years. Crickets, for example, are 20 times more efficient as a source of protein and produce 80 times less methane than cattle. Anyone for cricket flour pasta?

Tomorrow's Post-Human Landscape

But then it won't be insects that inherit the world of tomorrow. Futurists talk of the concept of 'the Singularity', that time in the not-to-distant future when machine intelligence meets

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and overtakes human brains. Noted visionary Ray Kurzweil even sets the year 2045 for this 'profound and disruptive transformation in human capability'. Maybe people will become the new insects, living in a world dominated by the scary new buzz-word on the futurist horizon: Artificial Intelligence.

'Crickets are 20 times more efficient as a source of protein and produce 80 times less methane than cattle. Anyone for cricket flour pasta?'

Contrary to popular preconception, AI is not about tin men and women striding about, taking all the jobs and turning factories 'dark' on account of being able to function without the lights on. AI is a cohort of new, disruptive technologies still in the infant stage of development. It draws on an array of AI tools from virtual agents, image and speech recognition and robotic process automation – this latter not really about robots in the classical sense but about software programmes that mimic human capabilities.

This AI revolution will no doubt transform that way businesses are run and wealth is created, though there are vast variation in adoption by different business sectors: leading the way are high-tech and communications activity and financial sectors while falling behind are the likes of building materials and construction.

But the wider impact threatens to be in producing a 'post-human' social framework. Sociologist Professor

JAMES BELLINI ON PAST, PRESENT AND TOMORROW'S WORLD

Dr James Bellini, Futurologist

Steve Fuller refers to this development as Humanity 2.0 – an understanding of the human condition that no longer takes the 'normal human body' as given. Technology advances will make it possible to greatly enhance the capabilities of our physical being. It's not so much that we're losing our humanity, Fuller says, but that it's becoming projected or distributed across networks and systems that lack a human body. We are becoming, in other words, inhabitants of virtual worlds – as if we hadn't noticed that already.

Artificial Stupidity

These trends need to be seen against the vast backdrop of the supposedly ubiquitous online universe of the World Wide Web. Hang on -- time for a reality check: as of 2018 almost one in ten UK adults have never used the Internet. And the numbers get bigger with age: of the 4.5 million UK adults who've never 'chased the clickbait', more than half are over 75. Since the fastest-growing demographic group in the UK is the over-85s, it doesn't take a Bill Gates or Steve Jobs to work out that these ageing cohorts could inherit the Earth by escaping the stultifying grasp of the digital age. I recall Nicholas Carr's cover story for Atlantic magazine, Is Google Making Us Stupid? and a raft of other essays in similar vein. Maybe, while AI marches onwards, the Digital Native generations will be increasingly afflicted by falling attention spans and intellectual short-cuts, valuing quick takes over long, deep thoughtful discourse. While the Digital Immigrant oldies wait in the wings, ready to seize the opportunity. In an era in which social media has been weaponised to the point that democracy is being damaged by Facebook posts, and Russian bots have Twitter accounts, it looks like this may already be happening. Now there's a thought.

JUSTIFYING THE BUSINESS CASE FOR RPA

Siwate Rojanasoonthon

Every firm has their own reasons for implementing RPA, and for where they are on that journey. The promise of being a cost-effective technology that is quick to make an impact is usually the main reason cited by vendors and consultants. Typical RPA projects promise significant reduction in manual work on an average of 70-80%, freeing up work forces for more value added tasks just 3 months after implementation. Managements expect a 3 years ROI of up to 400%. However, from my own experience and from discussing with early RPA adopters, delivering the promise can be challenging.

Cost of back office staff - USD
Source: Kinetic consulting

To elaborate on the challenge, let's consider RPA license cost vs. staff cost alone. Operating in South East Asia, the permanent staff cost is approximately US$ 10,000-11,000 per year while the top tier robot license cost between US$6,000-9,000 without the implementation or maintenance cost. Factoring in all the costs, however, running one robot can easily cost more than a staff member. To make the matter worse, the type of work that RPA is mostly suitable for has already been outsourced to contractors and temps whose cost are even lower.

Potential FTE saving per robot

With the FTE saving varying significantly from less than 0.5 FTE to 3-4 FTE per robot, the challenge to manage and deliver the promised benefit of the RPA implementation is inevitable. In this article, I will go over some key points to manage the cost and benefits and to ensure a successful delivery of RPA business case with its promised value.

Think harder about the hidden benefits

While creating your financial business case and prioritizing your RPA opportunities, ensure each and every value of your RPA opportunity is captured.

Be creative, quantify the benefits, and enable benefits release

Siwate Rojanasoonthon
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1 Increased efficiency

The most obvious RPA benefit is to free up staff time. To capture all benefits, ensure that you consider all types of workload being removed by RPA. For example, RPA may remove the requirement for staff to stay late and work overtime. Failure to reduce headcount does not necessarily mean the program failed to deliver benefits. Early RPA adopters were surprised that they were unable to reduce the headcount, contrary to their expectation, but an 8-hour saving does not always translate to 1 headcount cut since the impacted workers may be responsible for multiple tasks. Although the original focus may be on capturing the extent of how RPA has alleviated the workload, additional supporting actions are usually needed to enable a benefit release.

2 Lean

Automating a bad process is normally a bad idea. Process owners, together with a process analyst, should treat RPA implementation as an opportunity to reengineer the process, taking out unnecessary steps rather than just getting robots to repeat steps done by humans. Process redesign from small to large scale may include: removing human checking steps, considering batch processing at night, or restructuring inputs/outputs and the teams. Efficiency delivered from lean can be a major part of the benefits rather than RPA by itself.

3 Improving service level

With reduced cycle time, flexibility and reliability of robots, focus on how better customer experience can be achieved and build it into the business case as well. Take advantage of opportunities to operate 24/7 as some processes can be extended to operating at night without the need for staff; for example, customers can receive confirmation by robots that their request is completed in real time. Look for potential revenue increase from faster responses.

JUSTIFYING THE BUSINESS CASE FOR RPA

Siwate Rojanasoonthon

4 Improved accuracy

When operated by humans, there is usually a proportion of work that needs to be extensively checked and in some case reprocessed. As robots operate under strict rules, the volume of reworks can be significantly reduced - ensure to quantify and account for this benefit.

5 Other benefits

Think creatively of other benefits: could RPA reduce the amount of training required to onboard a new employee in a high turnover environment? Might it reduce the risk of being fined for regulatory mistakes or errors?

As mentioned earlier, the key to delivering RPA value is in ensuring that benefits defined can be released. To reduce headcount after part of a worker's day is freed up by robots, restructuring of roles and responsibilities must be taken. Alternatively, to yield higher value output for the business, the workforce may need additional skills to execute those more valuable tasks. Have commitment and establish milestones for headcount redeployment and headcount release. Also improve SLA to customers where applicable.

Consider complete list of cost components

A detailed approach is required in managing the cost of delivery and maintaining RPA in the organization.

Managing cost to the detail

1 RPA license

To make the most of the RPA license, focus on achieving the best utilization of robots. As digital workforce, the robots are supposed to be working tirelessly 24 hours a day. Remember to consider designing the automation that occurs during night rather than simply duplicating human work hours. I have seen peers who achieve more than 80% utilization and have also met some who have not started tracking or reporting utilization level. Tracking and reporting is the first step to improve license scheduling and utilization.

2 Resource and capability development

Different capability development models cost the business differently. Most people I have discussed with use external support for RPA capability development to some extent. In the business case, consider how long you plan to use the external support and ensure that internal capability is built in time to meet the transitioning out of it. Evaluate use of internal resource vs. outsource in some part such as configuring the robots or maintenance. Consider software ease of learning and community support when evaluating solutions. As when you start building the business case, estimating efforts for developing a process analyst and developers is required. It is also important to make estimates as accurately as possible based on the understanding and the complexity of the process. Also ensure that the knowledge for accurate estimation is improved over time.

> '**The key to delivering RPA value is in ensuring that benefits defined can be released. To reduce headcount after part of a worker's day is freed up by robots, restructuring of roles and responsibilities must be taken. Alternatively, to yield higher value output for the business, the workforce may need additional skills to execute those more valuable tasks.**'

3 Infrastructure

The cost of infrastructure during development and testing as well as production should not be overlooked. Infrastructure cost goes hand in hand with the ability to utilize the robot license. Work closely with IT to develop the best synergy with existing IT infrastructure in the organization.

4 Maintenance

RPA, although being recognized for speed to market and lower implementation cost, it is also known for having higher maintenance cost. Be aware of, and consider these factors up front when selecting the process, including the technical sensitivity of some specific applications in the

JUSTIFYING THE BUSINESS CASE FOR RPA

Siwate Rojanasoonthon

organizations, the frequency of changes of applications which cause robots to be modified, and the potential change of process and application in the short to medium timeframe.

5 **Change cost**

An integral part of successful RPA is change management. Restructuring roles and responsibilities for redeployed staff is part of the effort required to capture benefits. Various training and people development program need to be introduced to have people ready to work with the automation technology. Other efforts, not to be neglected, are in updating related processes and procedures as well as the business continuity plans.

FINAL TAKEAWAYS

The business case of RPA is not a one-off exercise at any single point in time of the project. It is an iterative process within the project life cycle, from pre-, during and post-implementation. Pre-implementation, the business case is a solid platform for prioritizing RPA opportunities. A realistic business case helps keep key stakeholders aligned on the expected benefits as well as the potential challenges which need to be addressed up front. Tracking and revision the business case during the implementation allows key assumptions to be revisited. If either costs or benefits factors varied from the original, it is best to learn about their impact on the expected return early on and to be able to take the appropriate course of action. Post-implementation, the actual costs and benefits need to be compared against what was planned. This is vital, because gaining the knowledge on both the factors promoting the higher benefits and those blocking us from achieving the benefits can be incorporated back into implementing the next RPA opportunity, allowing a continuous cycle of learning and improvement.

CASE STUDY: HOW RPA DELIVERS GROWTH, SCALE AND SMARTER LEAD GEN

Mikko Tamminen

Taskeater provides cost-effective solutions for lead generation and setting up offshore data teams. PEX talked to Mikko Tamminen, Chairman and CEO at Taskeater, about how RPA has been instrumental in transforming businesses around the world.

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Taskeater CEO & Founder

PEX: Mikko, let's talk about your experience with RPA, as it's something you've had to embrace to stay ahead in the very competitive B2B space. Your company, Taskeater, is a business process outsourcing company. You've handled outsourcing for big companies like JustEat, Time Inc, but you're working with a lot of SMEs too, aren't you?

Mikko Tamminen: Having larger and more established clients does give us some insight when we're helping startups and SMEs streamline their internal processes, and most importantly, grow. We are specialist providers of B2B lead services - sourcing leads according to strict targeting criteria, building and verifying custom lists and then conducting the initial email outreach.

PEX: Sourcing leads is a key business process isn't it? No leads – no business!

Mikko: It's fundamental, yet the average sales team spends only ⅓ of their working day actually talking to prospects. You talk to salespeople, they tell you that prospecting is the hardest part of their job – mainly because selling and prospecting aren't the same thing at all. It's a very different skill set..

PEX: The solution for many companies is to have an internal team do the leg work.

Mikko: - or worse buy lists that aren't targeted or are out of date. Lead databases just decay – like driving a new car off the forecourt, they can lose a huge amount of value in a short space of time. The other approach to lead generation tools often depends on existing web traffic which is collecting leads based on IP address of your visitors. After GDPR, people are very wary of doing this. Finally, there is manual list building, which is a huge limitation if you don't have much web traffic, you are just starting out or you are building something new.

PEX: Right, so there's a clear opening in the market there for you

Mikko: We wanted to build a solution for growing sales teams, either in the startup space or teams expanding into new countries and new markets. This outsourcing gives sales teams and their supervisors the time to focus on growth and business development.

PEX: So what did you come up with?

Mikko: Taskeater built up an operations division in Dhaka Bangladesh of almost 400 strong, we were able to combine specialist offshore lead generation teams with the best databases available to custom build lists to order.

PEX: You've already mentioned GDPR – where does that fit in?

Mikko: One of the words that jumped out at me from the GDPR legislation was 'relevance'. This speaks very clearly to us, because for most people, getting the right data is their big problem, while for us it was a key part of our offering… a real case of turning an obstacle into an opportunity. So, only the most relevant data per campaign is collected, key under the newly enforceable GDPR, and ensures more engagement from our client's outreach campaigns. There's also the legitimate interest factor. The ideal lead for our clients would be one where the lead is actually pleased to get the call - and legitimate interest takes us a little closer to achieving this.

PEX: So your job is to target leads, collect data, and reach out.

Mikko: Exactly. We eliminate the bottleneck. All our clients need to deal with are the positive replies.

PEX: OK, give me an example. Who is this working for?

Mikko: We have a client, a start-up in its second year offering the largest platform in the UK for parent-to-

CASE STUDY: HOW RPA DELIVERS GROWTH, SCALE AND SMARTER LEAD GEN

Mikko Tamminen

parent communications and school fundraising. They were struggling with a smaller team to prospect potential business sponsors and advertisers for their newsletter. The newsletter was incredibly well-read, by the way, so that had great reach, but it wasn't translating into cash. They were very reluctant to go down the route of bought lists, and with good reason, as these often have more bouncebacks than replies. They were also very sensitive about GDPR, and quite right too. I think a lot of SMEs looked at the fines for GDPR non-compliance and thought 'I don't know if we could survive getting caught out on that.'

PEX: OK, give me the numbers. What did your team do for them?

Mikko: They used our solution to scale their lead sourcing process, employing 2 of our analysts as a remote lead generation team, and to handle the first stage of their outreach, and were able to build out predictable pipelines for their sales reps. We were able to collect 1600 leads per month, with an average response rate of 30% and an average positive reply rate of 12.9%.

PEX: OK, impressive stuff. How did the outsourcing work? And how have things changed?

Mikko: As offshore business process outsourcers, we traditionally did everything manually, providing useful leads to sales teams hungry for potential clients. However, as the outsourcing industry more broadly has transformed with the influx of new technology solutions - automation tools and platforms, artificial intelligence, and Robotic Process Automation - our business model has evolved to combine the best of both people and tech.

PEX: Talk me through the tech. Is this off the shelf stuff or are you building your own robots?

Mikko: Getting the right tools has been vital in providing more value to our clients. Moving from manual to automated processes has been a very natural evolution, and a move we knew we had to make sooner rather than later. Yes, we have email automation software, open rate tracking tools, lead verification technology. The next phase for Taskeater was to take on an active role in the development of new technology.

> **'Using these technologies has changed the roles of our employees to work in tandem with technology through providing expert maintenance and moderation. Our lead generation process today works to combine the accuracy and speed of these new tools and technologies with the creativity and flexibility of human employees.'**

PEX: What about your work force in Bangladesh?

Mikko: Like a lot of our clients, we are figuring out how to scale. We are using robotics technology to build out a unique data sourcing and enrichment process, and the element of human quality assurance remains essential in order to ensure total accuracy.

PEX: So you haven't displaced workers?

Mikko: Far from it. Using these technologies has changed the roles of our employees to work in tandem with technology through providing expert maintenance and moderation. Our lead generation process today works to combine the accuracy and speed of these new tools and technologies with the creativity and flexibility of human employees.

PEX: So you'd say RPA has been a useful tool for growth?

Mikko: Definitely, and businesses are asking the question 'what can we use RPA for?' Once they have seen it work, they are hungry for new applications of the technology. The challenge for anyone considering RPA is deciding where it makes the most sense in the organisation, as RPA solutions can require quite a large upfront investment. You want to make sure you prioritise areas in which it can have the most immediate positive effect, and it will compliment anyone else's work who will need to stay involved in that process.

LEADERSHIP AND TECHNOLOGY

Samantha Bureau-Johnson

Samantha Bureau-Johnson is VP, Enterprise Process Solutions & PMO at Blue Cross NC. She is a seasoned executive who translates business strategy into execution.

Taking entrepreneurial and nimble adaptive leadership, her specialisms are transformation, strategy execution and change management. Samantha also believes in developing talent as a trustworthy and transparent leader. Her extensive business and technical acumen, makes her an expert in delivering technology assisted business solutions.

PEX wanted to know how leadership and technology were going to fit together in a world driven by change.

PEX: How important is it for business leaders to understand the technology? Or is it sufficient that they merely understand the benefits and let someone else handle the detail?

Samantha Bureau-Johnson: As technology becomes more integrated with an organization's business model and business process, it is more critical than ever that business leaders, at all levels, also have technical acumen.

It doesn't need to be at the middleware, coding or infrastructure layers, like a CIO or CTO. However, just as CIO's need to have strong business acumen, business leaders need to have strong technical acumen so that they can discern how to fuel and enable their business.

They can also benefit by being able to understand how to execute technical implementation work in their organizations so they know the risks, as well as, other organizational changes that will be required to fully gain the business outcomes they are trying to achieve. Technical acumen is becoming more critical in business decision making to fully understand the investment in the enabling technology and what would the overall investment be to reap the full results of unlocking the business enabling capabilities of that technology, as well as, the ongoing run rate costs to the business, impacting the bottom line. Ultimately the long established divide between business and technology is shrinking at a rapid rate, as technology becomes less of a mystery and more of the Apple and Google

Samantha Bureau-Johnson ▶
en.wikipedia.org/wiki/Women_in_STEM_fields)
VP, Enterprise Process Solutions & PMO at Blue Cross NC.

models, of making the technology simple, intuitive and friendly.

PEX: Would you say there is an opening between the leaders with a grip on tech and those who don't? We've seen some big companies falling over (like Blockbuster, as well as lots of retailers) because changes have caught them seemingly unawares.

Samantha: Some of what leaders grapple with in today's global world, is how fast business is changing. How do they make bets on in an uncertain future? That uncertainty is largely being driven by the rapid acceleration of technology, which is driving innovations and in essence changing the traditional business model at a radically accelerated pace. You constantly have to be improving, looking at the core business critically, staying aware of what your competition is doing and pushing forward to potentially disrupt your own company by challenging convention.

Although you could say all that has been a part of business since business began, what is different now is the rate at which businesses need to transform and possibly reinvent themselves.

Instead of years, businesses now have months to edge ahead of the competition, and/or just remain viable. It puts pressure on leaders to understand the "art of the possible" through technology to constantly reinvent themselves which often requires them to simultaneously, continue with their profitable business, while in parallel kill it off for a better innovation that will be long term revenue growth.

That is what Netflix did with their mail order DVD business. They understood where the technology could take them, and they bridged until it was a reality. Blockbuster didn't see the shift in time. Having technical acumen, coupled with a

LEADERSHIP AND TECHNOLOGY

Samantha Bureau-Johnson

deep understanding of how your organization can execute the business strategy through technology, coupled with great talent and an engaged focused workforce, I believe is tomorrow's competitive advantage. Leading with an emphasis to blur the historical divisional lines of IT and Business teams, will become one of the critical skills of the successful leader, just like understanding Finance, Strategy, Operations and other core business skills.

PEX: It strikes me that smaller an organization is, the more agile it's likely to be. Disruptive start-ups like Uber and Airbnb have changed the landscape for their industries. Do you think big businesses are going to fracture into smaller units? Or are they going to get smart with partnerships with smaller companies?

Samantha: I haven't seen data related to this type of shift for big businesses and how this would lead to more innovation and successful outcomes, therefore I can only share my perspective.

The success of any business, regardless of size or industry, at the core, can be tied to Leadership, Talent and Culture. That coupled with clarity of purpose, measuring execution and performance, seem to be solid ingredients. A start-up has a culture that embeds relentless focus, grit, flexibility, and 'we can, we will overcome' mindset. Think of how Jeff Bezos started Amazon, it was his Leadership decisions to achieve the objective, the talent of those he brought in to execute to that objective and the culture he developed to overcome a lot of challenges. Amazon made constant course corrections, made seemingly riskier business decisions than, say, Barnes and Noble, however, their deep commitment, passion, and drive pushed them forward.

For large established businesses, the ability to seek out to actively disruptive themselves often doesn't happen because of the acceptance of the 'status quo'. They stifle innovation by having talent systems and cultures that have atrophied. Why change when you're seemingly successful? If your culture mindset is, 'we have been here in this business for years, we have the market share, we are good', then the business is in a decline mindset vs. a growth mindset. Those businesses miss the signals that are screaming 'We need to change!' For example, let's look at Kodak.

How ironic that the major player in cameras and film, was disrupted by digital cameras that they first invented. The fear of disrupting their perceived 'great revenue generating thing' was stronger than the vision to disrupt their current revenue stream, for the one that would take them into the future. That seems to be a failure of leadership and also a talent and culture failure, because it wasn't seen as a blind spot or if it was, did the culture support a strong strategic debate. History allows us the 20/20 hindsight to be able to assess these types of examples, and upon reflection, we should learn the leadership lessons in them as well as the strategy failure or some other aspect.

It seems that as you look historically at big businesses, they only disrupt themselves, when faced with a serious threat, vs. being proactive to ensure that threat doesn't have an opportunity to emerge. Humans don't actively seek change, so having a culture that embraces innovation and change can help overcome that happy state of "don't upset the apple cart" that most people feel. Executive Leaders, as well as leaders throughout a company, must be constantly striving to squash status quo thinking, and set up positive reinforcement for the pursuit of continuously learning, adapting and shifting the business forward. Regardless of the size of the business, for me it still comes down to Leadership, Talent and Culture as the key to success, coupled with clarity of purpose, measuring execution and performance.

Perhaps businesses, regardless of size, need to ensure they have diversity of leadership experience in both entrepreneurial and structured environments, to ensure that they can evolve, grow and thrive in a future of fast change and uncertainty. Bottom of Form

PEX: Are we winning the battle to make boards more diverse? I'm aware that the more pressure people feel, the less likely they are to take what they perceive as a 'risk' by widening the gene pool. It's taking a long time for women to get the numbers, what are boards doing to ensure what I'm going to call 'mindset diversity'?

Samantha: Ian, great question and diversity of mind-set is critical for a thriving board and company. Keeping a focus on this topic with continued awareness, can help with

LEADERSHIP AND TECHNOLOGY

Samantha Bureau-Johnson

ensuring modern businesses are growing the opportunities to learn from very different experiences, perspectives, to achieve a diverse mind-set.

It is easy agreeing with like-minded individuals, however in today's global and fast changing world that is a road to atrophy, vs. a thriving relevant business. In Feb 2017, the New York Times ran an article on the Women and Minorities on Fortune 500 Boards. The article written by Elizabeth Olson found only modest gains over a 4 year study, with women and minorities representing 31% of the board seats at those companies.

Although the article says it is the highest in the six year study conducted by the Alliance for Board Diversity, the data shows there is more room to move the needle.

> **'How ironic that the major player in cameras and film was disrupted by digital cameras that they first invented. The fear of disrupting their perceived 'great revenue generating thing' was stronger than the vision to disrupt their current revenue stream, for the one that would take them into the future. That seems to be a failure of leadership and also a talent and culture failure.'**

Gaining diversity at the board level will take boards actively shifting how they look at the gaps they have in skills, talent and experience, as well as the process to fill board seats. Boards are in place to set a company's mission and vision, have fiduciary responsibility, provide oversight of how the company is being run, evaluate CEO performance as well as, hire/fire the CEO. They have a huge responsibility to the company and to the customers, key stakeholders and investors of that company.

Key to shifting diversity in boards is unpacking how boards

recruit talent. Is it a process of networking among a close group of friends and colleagues? Or is it a process like a top talent job search?

Board seats are seen as a signal of importance, and given their role for the company and compensation for that responsibility, you can understand why those seats may be seen as wanting your network and colleagues to be part of it. However, the company needs top talent on their boards, to help advise and guide the company. Perhaps to achieve diversity, a board could assess how they can open up a search across industries, diverse backgrounds with a goal of adding to the diverse mind-share. Boards usually have a sub-committee that recruits board members. The Board Chair, as well as the overall board, can shift their emphasis to ensuring that this sub-committee has clarity on what gaps the board is trying to fill and look outside of their immediate networks to recruit the best talent and broaden diversity of mind-set.

Boards could shift to undertake a formal recruitment process, regardless of the size of the company they serve, that is aligned to the strategic outcomes of the company and equally important, the customers and constituents that the company represents. Understanding also where the company is at, helps fill open seats with the right talent. For example: Are they in the midst of an expansion, transformation, financial crisis, or a shift in strategy, etc. Regardless of the role you play on a Board, all directors need to look around the table and continually ask how the whole board is adding value to the company. Part of that value comes from role modelling the diversity that you want a company to have so you can help the company set a bold mission and vision.

This brings it right back to your first question about technology: as I said, the people with a talent for technology will be able to occupy those seats at the senior leadership table. Where are women best represented in STEM subjects? Asia has more female than male researchers, and the United States has slightly more women STEM graduates by a couple of percentage points. So the future is going to be more balanced, we just need to ensure that the convergence of business and technology is matched by a convergence of business and culture.

TECHNICAL CHALLENGES FOR ESTABLISHED BUSINESSES

Thierry Derungs, BNP Paribas Wealth Management Chief Digital Officer

As Chief Digital Officer, I have seen a cultural divide between leaders – both within the banking community, and across the industries we serve: there are those who see new technology as a challenge and those who see it as an opportunity.

The true picture is that it's an opportunity – with challenges. For established banks such as BNP Paribas, a large part of the appeal that we hold for our customers is that we have been around for a long time, with a very long story. If you believe that longevity counts for something, which many people do, this is a strong selling point. But with that history, there is a legacy: as soon as we talk about emergent technologies such as AI and automation, we are presented with a new paradigm which we have to integrate into our framework. Getting the new technology to work with older legacy systems is, as you might imagine, not always a straightforward process.

Fortunately, that's really our only major technical challenge.

Perhaps more difficult for the bank is the question of mindset, and this can encompass both business and IT. These two parts of the company have always been somewhat separate, and now we find they are moving closer together. As we are finding new technologies, we are finding new ways of working, and one of the results of that has been working more closely with colleagues from different departments. These new experiences are ones that we can continue building on and growing. As with any technology, it is vital to remember to put the business case first, rather than finding an elegant and interesting solution to a problem that doesn't exist or is not important enough.

The opportunities in the banking sector are huge: we are continually seeing new businesses springing up with products that are built from the base up. These businesses understand that their digital native customers interact with the world through their smartphones. The history of a company like BNP means less to them.

There is a real allure to these businesses that start up and grow very quickly, unconstrained by what has gone before. Something like RPA can deliver a good portion of that capacity to grow, and there is the possibility of matching the

Thierry Derungs
BNP Paribas Wealth Management Chief Digital Officer

After more than 15 years at ING Belgium, Thierry joined BNP Paribas in 2009. He has successfully led a wide range of digital projects and programs for the past 20 years including web and mobile, contact centre, ATM, and CRM.

As Chief Digital Officer for BNP Paribas Wealth Management, Thierry's job is to develop and oversee the Digital Strategy for Wealth Management on a global level – providing country-based support for the deployment of all new projects. Thierry's strong foundation in international management, strategic business planning and program management, underpins his belief that 'each and every initiative is an equally important step along the path to bring about the deep transformation of our business.'

technical challenge with the business model of the bank itself.

While the smaller startups have the bright idea, the agility and if they're lucky some enthusiastic investors with deep pockets, legacy organisations have the reach to bring in talent wherever it is in the world, we're prepared to put a lot of resources into a project, and the connections to make things happen. For every new start up 'giant killer' there are plenty more which fall by the wayside.

The temptation with technology is to bring it in, thinking it will be a magic bullet for all your problems. But even a brilliant technology like RPA has to be applied intelligently. You also have to hold your nerve in the early days when everyone is learning how to get it to work, overcome the teething troubles, and let failures educate your next step rather than sink the whole project.

With experience comes speed, and after you've done all your learning, the technology can roll out across other areas of the business and each rollout will be faster than

TECHNICAL CHALLENGES FOR ESTABLISHED BUSINESSES

Thierry Derungs, BNP Paribas Wealth Management Chief Digital Officer

the last. But that first step is not as simple as some will lead you to believe – particularly if you're dealing with a lot of processes that have been around for a long time.

The rewards on the other side of those challenges are worth having, though.

Just consider risk management – a key part of the operations for a bank. With more data points, and more analysis, we are able to give customers a much more accurate understanding of the risk they are facing in any scenario.

Fraud management is really moving to a much more advanced area allowing us to be faster in spotting and stemming frauds that are happening across the world. Fraudsters will always try to find and exploit weaknesses in a system. The end product of applying technology to the problem of fraud is that we have a mix of solutions: more effective management of risk, and better analysis of behaviours that tell us that an act of fraud is of emerging, even if it hasn't yet taken place. Preventing fraud before it happens without jumping at every shadow is a challenge that AI is helping us tackle without wasting time and money.

For me, the biggest success of technology is not about fighting people behaving badly, it is about running the bank well. Globally, there are over 3,000 changes to the rules and regulations under which we operate – per year. Since 2008, the number of rules and more importantly the changes in existing rules has grown for all of us involved in complex wealth management – which can make life for us a bit complicated.

The time when we could keep up to date with the rule changes by human brain power alone is long gone: today, humans cannot manage without the right technological tools at a decent level of risk. If you are reliant only on your relationship manager's memory – then the level of risk is really high. This volatility in the regulation environment is also why blockchain is absolutely vital to the industry: it's essential that we are able to know what rules were in place when a transaction happened, so that in the event of any issue we are able to explain why we did what had been done and what information was available at the time. The

blockchain capabilities to provide unalterable information once validated is key and very promising in that area.

Finally, to step away from technology for the moment. Technology will always change – but it can now be felt in leadership, and is having a fundamental impact.

The key skill for tomorrow's leaders will be (very) fast adaptability. Leaders must be flexible to deal with a changing environment, and ready to respond to circumstances which may be beyond their control. They need to be able to take in a lot of information from their network – and that means understanding their network, its strengths and weaknesses, where it is trustworthy and where it isn't so reliable.

We have been on a long road when it comes to managing the issue of diversity, and there is still a long way to go. But diversity is about a profound culture change, and culture is changing. The businesses that are hiring leaders will, more than ever, be looking for the relevant skills, and less concerned about skin colour or whether the candidate is male or female.

Leadership is something that AI can't give us, and ironically, I think that the leadership of forward-thinking tech companies looks overwhelmingly white and male. Just have a look today to a class of engineers and you see that it is still too male dominant... But things are changing. The old way of thinking – such as not hiring a woman because she might want to have children – is behind us and has since long been less of an issue for companies of our size.

Tomorrow we will not have the leaders that we have today. They will have new ways of working. The opportunities are more open for people whatever their background. The challenges are going to overwhelm much of what we see today that simply won't work in the future. The digital natives, the ones who understand machines, will look much more to be our partners for a challenge rather than expecting a long lasting carrier in a single company. Richness and diversity of experiences will shape them to be the leaders of the future.

MILLENNIALS IN THE BOARDROOM: THE FUTURE OF LEADERSHIP

Ian Hawkins

Mark Zuckerberg's outfit was deserving of the full red carpet post mortem when he gave evidence to congress earlier this year. The head of a social networking company, his public image is of a typical millennial nerd-turned-dad, sporting tee shirts and hoodies and the occasional Viking costume to go trick-or-treating. As he emerged from the car to answer politicians' questions, however, he had adopted another costume: he'd arrived dressed like a CEO. It was a very good costume indeed, so good, in fact, that the assembled senators assumed it was a uniform.

In a suit and tie, Mark Zuckerberg is the snapshot image of anxiety about millennials, a portent of the future that understands and exploits the trappings of the past. What do millennials mean for business, culture, politics? How do businesses attract them as customers? How are they shaking up the workplace? Can we court their vote, sell them what they want, answer their needs and negotiate the future together?

The most conspicuous anxiety about millennials is around the question that very few people are actually asking: what are they going to be like when they get into the boardroom? The focus has been on millennials as consumers and voters – think of mortgage apps, restaurants plating up meals with an eye on Instagram, political campaigns being clandestinely fought on Facebook - but what are they going to be like as leaders?

Whether you've got a colleague or a boss who's a Millennial – or you want to attract Millennials to your leadership team – here are some of the key factors that will make or break your relationship with this generation.

Changing definitions - *A fresh look at leadership.*
workplacetrends.com/the-millennial-leadership-survey/
There is a huge appetite among millennials for positions of leadership. According to the Workplace Trends Millennial leadership Survey, '91% of millennials aspire to be a leader and out of that, 52% were women.' Within that drive for leadership is a willingness to re-evaluate what it means to be a leader: 'Almost half of millennials define leadership as "empowering others to succeed" and when asked what their biggest motivator was to be a leader, 43% said "empowering others", while only 5% said money and 1% said power. When asked about the type of leader they aspire

to be, 63% chose "transformational", which means they seek to challenge and inspire their followers with a sense of purpose and excitement.'

If 93% of millennials realize their ambitions, though, there will be a case of too many chiefs – unless the workplace itself radically changes to incorporate flatter hierarchies, more autonomy, and more collaboration.

Volatility - *If they aren't happy they will jump ship.*
The job for life is a rarity – and young people have no expectation that the job they take on leaving education is going to bear much resemblance to the job they expect to have a decade (or less) hence.

They are driven by a social circle that operates online as well as real life – so a workplace that has some bragging rights (location, look and leisure options are all drivers) can have an impact.

But a few cool decals and a pool table won't necessarily keep them on board for long: figures show 91% of those born between 1977 and 1997 expect to stay in a job for less than three years.

> **The Future Of Work:**
> Job Hopping Is the 'New Normal' for Millennials ❯

Remember the stats about wanting to be a leader? That points clearly in the direction of self employment. We may be on the brink of a boom in niche SMEs powered by advances in smart accounting software that becomes available at low cost to business owners.

Flat hierarchy - *Don't manage, facilitate.*
Millennials value ideas, and are likely to value a structure that gives them access to people across the organization.

Consider Valve, the gaming company behind titles including Half-Life, Counter-Strike, Portal, and many others. 'At Valve there are no job titles and nobody tells you what to work on,' says author Jacob Morgan. 'Instead all the employees at Valve can see what projects are being worked on and can join whichever project they want. If an employee wants to start their own project then they are responsible for securing funding and building their team. For some this sounds like a dream for others, their worst nightmare.'

MILLENNIALS IN THE BOARDROOM: THE FUTURE OF LEADERSHIP

Ian Hawkins

The 5 Types Of Organizational Structures:
Part 3, Flat Organizations ⊙

And according to Workplace Trends, '83% of millennials said they would prefer to work for a company with fewer layers of management.'

A flatter hierarchy means more small-scale and start-up projects, even in large organizations. More start-ups means more risk, and more risk means more failure. More failure, however, pays off – with more innovation.

Feedback - *Making work social.*

As an extension of their desire to work and lead in companies that have adopted a flat management structure, millennials want to work with leaders who value feedback from all employees. To millennials, it simply doesn't make sense that only the thoughts and experiences of those in management should be the only factors in organizational decision making.

This is because millennials are often keenly aware that the further up the corporate food chain people are, the more they tend to lose understanding of the challenges other employees face. They also tend to dismiss the validity of their experiences.

As Workplace Trends found, '58% of millennials said that the most important leadership skill is communication, which 51% said was one of their strongest skills. 55% of millennials said that the most important leadership skill is the ability to build relationships, which 66% said was one of their strongest skills.'

CSR - *Inside the company...*

Forget the work/life balance; millennials don't consider these to be competing for attention – so long as it is productive, enjoyable and good for you, work is life. There is an expectation that organizations have to look after their employees: an American Express report says that 'people issues gravitate towards the top [of concerns]: paying employees fairly; retaining talent; flexible working; relevant rewards; and managing skills shortages. The CEO of the future is going to be heavily involved in people planning.'

Redefining the C-Suite:
Business the Millennial Way ⊙

...and outside.

www.conecomm.com/research/

According to research by CSR consultancy Cone, 70% of millennials will spend more on brands supporting causes they care about. Certain charities are, to some extent, the symptom of an unequal society. If charities exist to fix problems, they become unnecessary when the problems themselves are eradicated by organizations behaving more properly in the first place, an attitude summed up neatly by Abhishek Ranjan (currently leading Banking Industry Marketing, CSR, and Sustainability for Brillio Technologies) on CSR Newswire: ' We started social responsibility from the very first year of our operations, and everyone believed that giving back to the society should be a cultural thing and not merely a checkbook philanthropy.'

CSRwire Talkback:
Lessons of CSR Leadership ⊙

Conclusion

Add together the flat hierarchy, the absence of managers, the increased reliance on interpersonal skills while the computers deal with the data, and organizations as dedicated to making the world better as they are to turning a profit, and you have a blueprint for how the workplace of the future may look.

Expect a new approach to failure, with failure being accepted as the price paid for innovation.

Transformation is change on steroids. The OPEX Benchmarking Survey 2018 tells us that people are at the heart of what we do in Operational Excellence. The promise of technology is that it will ultimately free us from routine, robotic tasks and enable us all to be more human. What does it mean to be 'more human'? Are humans changing? Millennials certainly seem different. Today's school leavers are tomorrow's leaders, and the generation they raise will be further removed from our experience than we dare imagine. Exciting times lie ahead!

CLIENTS, COLLEAGUES AND COMPUTERS

Loren Bishop - VP, Director of Lean Management Office at State Street

In Loren's own words, he is 'passionate about culture, leadership and customer experience.' It's a passion that has served him well throughout his tenure at American financial services and bank holding company State Street.

But in the rush to automate, are businesses at risk of leaving some of their most valuable clients behind? And what about within organisations themselves – what prevents people from using the best technology at their disposal? Technology often requires users to take a leap of faith, and too often the fear of doing so prevents people from taking full advantage of the opportunities on offer.

PEX wanted to know: given that so much of automation makes a business choose between what's good for process and what's good for customers, which side he would fall on?

Loren Bishop: I think you can have the best of both worlds. The customer is growing more used to doing things for themselves, and it's part of the deal for them to get a better price, or a better fit of product or service. We outsource a lot of process to customers and we outsource to vendors too. Financial services are maybe a bit different to other products, because customers are concerned about having the appropriate levels of transparency in communication of service.

PEX: Most banks are keen for us to sign up to their app or online banking. Is it the same for State Street customers?

Loren: Technology is giving customers a way to be able to control the information they need and give it to them in the form they want when they want it. Customers who are tech savvy are more able to interact across a number of devices.

PEX: Does this risk leaving behind some of your older, and perhaps more valuable customers?

Loren: These are the stalwarts – clients of ours who are into tech but still like their paper statements and are resistant even to the changes that would make their lives easier. Being able to manage those client relationships where you're trying to standardize a process and be more effective and more efficient – for instance reducing faxes that come

Loren Bishop ⊳
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Loren is a Lean Master and results-oriented Relationship, Client Services and Operations Manager with over 20 years of demonstrated success in the financial services industry. He specialises in developing profitable client relationships, delivering high quality services, leading and overseeing significant Lean project initiatives, cross-selling products, and running operations groups effectively.

in will reduce the number of manual processes that we have to deal with. We have some major clients who have a lot of people they're communicating with by fax, and they don't want to change to integrate into our system. So we've had to come up with a way of dealing with that fax, and come up with a process for it. Character recognition type software, machine learning,

PEX: There's a customer service issue here though, you can't say to your client 'We will deliver what you want – so long as it's this.'

Loren: True, we can't eliminate the fax, but we can change what we're doing to reduce the number of manual touches, developing new technology that enables us to read those faxes. So we can continue to take the fax and service that client.

PEX: How does trust play into this? Apps used to be games you'd play on your phone, and now they are platforms for major investment decisions.

Loren: There is a level of confidence that comes through a level of familiarisation with technology. Some of us have a home where an app switches on appliances, feeds the fish – it's a completely integrated with their mobile device. As a financial service institution, some clients are interested in having access to their information via a mobile device, and others show a great deal of concern about whether

CLIENTS, COLLEAGUES AND COMPUTERS

Loren Bishop - VP, Director of Lean Management Office at State Street

it's acceptable. So getting them comfortable, showing the security we have in place that shows we're able to protect their data – that's part of a culture that's important to all our customers. Data security is a huge focus for us and continues to be as we push the boundaries of technology we're investing in safe guards to make sure the data we have is looked after.

PEX: There's a perception of risk that doesn't always tally up with reality.

Loren: And some people will always feel more comfortable talking to another person. They say 'tell us, don't put it in an email because we don't want to talk to a robot. We want to talk to a person.'

PEX: How do you shift the culture from 'I want to talk to my broker' to 'I'm quite happy to access this service through an app'?

> **'When a new piece of technology comes up you've got to get comfortable with it. You've got to understand how to manage it, so you can get a better experience off it.'**

Loren: What happens in those conversations - one of the things we do is provide a client-centred experience. Give the client some key points of contact. We may have multiple entry points into State Street where we have touch points with the clients and they interact across different groups – some of the feedback we get is they don't feel they get the same level of service they get from all of those touch points. So we are trying to standardise that service and let customers navigate access to everything they have rather than letting it be segmented. This includes access to back operations services.

PEX: So the human touch is still important?

Loren: It's essential, which is why we've got a global

contact for our key relationships to be able to provide that. That's the first person they can interact with who can show them around the organisation. We are finding in our business people want to talk to people. Particularly when it comes to developing strategy, talking through a product or service, that needs to be held to a person. There are some things we are able to get them to use from a technology perspective like metric reporting, but then there are other times they want that hand-touch feeling, particularly our top tier clients. They want to be reminded they're top tier and served as such. It's a great reminder over all that it's not just a focus on technology that will bring transformation; it goes back to people, process and technology. You have to realise that people are needed to facilitate the process, introduce the technology. The process needs to change to optimise the time our people spend giving the client an experience. You need to think about all three, you can't focus on one.

PEX: There is definitely a psychological aspect to what people will and won't use. People have in mind what technology is 'for' and anything outside that definition is treated with suspicion. Does that affect your business?

Loren: Absolutely – think about the hackling and data breaches that have affected our industry. When a new piece of technology comes up you've got to get comfortable with it. You've got to understand how to manage it, so you can get a better experience off it.

CLIENTS, COLLEAGUES AND COMPUTERS

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On a personal level I have friends who will use online banking, but they won't set up automated withdrawals because it gives a company too much access to the bank account. From their perspective, the more people I give my key information to, the greater the chance and probability that something could happen - because what is the chance that every company I give my information to will have the same amount of security as the one I really trust?

PEX: Sure – like some people have a credit card just for online shopping.

Loren: You get some people willing to choose technology options and others are holding back.

PEX: Lean is really about managing people as much as tech. So what have been your challenges in implementing lean in this bright new technological word?

Loren: The main challenge is helping people remember it's a mindset. It goes alongside of what you do and becomes part of who you are, your day to day, it's how you work. Getting people to realise that lean is not just a project they do in addition to their work, it's a way of approaching work, asking questions, like 'how can I improve this process?' So we're trying to change the mindset to the point that people are even asking how they approach things in their personal lives. Senior management will sometimes think that the silver bullet is technology. And the focus will be so much on that, because they don't understand why we haven't been able to create the thing we were trying to create. We haven't been able to realise the benefits – that's when they start asking questions.

PEX: By which time it's too late.

Loren: We've found that when you introduce technology to a process, it doesn't automate the entire process, people are needed to facilitate the process. And if we haven't optimised the process over all, there is no free flow of technology from end to end. Realising that technology has been introduced to a process, it's a perfect time to go back to it and see if it's all been optimised. Make sure that it's working in the most effective way.

PEX: What you're saying is that humans and machines need each other. You can't hand it all over to a computer and expect it to work in a way that makes everyone happy.

Loren: It comes back to the psychological element again. Technology will be developed, it will go to people out in the business and they'll be trained on it, but it won't be adopted. They've got this great piece of new technology that isn't being implemented, yet if you ask them the benefits, they can tell you exactly what they are.

PEX: What's the answer to this?

Loren: You have to go beyond the intellectual. You have to make people care. You can't do it by rationalising or PowerPoint. Whether it's a customer or a colleague, you have to go in and have these conversations: 'Are you aware that these technologies are available? Are you utilising them to their full capabilities?' And we put together some best practice guides to help them make the best use of the implementation so we're going back to realising that that was a gap for us. And the only way to fill that gap is to win over the key stakeholders, one by one if necessary.

LET THE BOTS DO THE LIFTING:

How automation speeds up processes, increases accuracy, and gives people opportunities

Manish Rai - VP of Product Marketing, Automation Anywhere

Manish Rai is VP Product marketing at Automation Anywhere - a US-based company that is making RPA accessible by applying the latest in cognitive technologies and user-friendly interfaces. But how do businesses make use of the technology? What solutions are they providing? And how can a successful automation project migrate to other parts of the business?

We asked Manish to talk us through a customer's journey from identifying an issue to arriving at the Automation Anywhere door.

Manish Rai: One customer was looking to automate their order to cash process - they'd heard about RPA and started their RPA journey, exploring their options in the middle of 2017.

They are a technology company and like many tech companies, 50-70% of the orders come in at the end of the quarter. So there is a spike in demand as their customers were trying to get a better deal. They had about 50 FTEs working around this process because they had to manually look at the order, compare them against the quote, perform 15, 16 different validations and so on.

PEX: So the problem is it's a spiky demand. There will either be too many people working or not enough.

Manish: Yes, at times even the 50 FTEs are not enough, and they were having to hire in temps.

PEX: So I guess that happens to lots of businesses, it's quite a common problem?

Manish: Yes, especially as people are trained to wait until the end of quarter to get the best deals!

PEX: So what did you promise? What did you bring in?

Manish: Initially they looked at data capture (intelligent OCR) solutions working alongside RPA to try to automate that. They put in the front end work of using RPA to manage the incoming volume of orders, extract them from emails and attached purchase orders. Then they used the data capture to try to extract the information. But each order

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Manish Rai is Vice President of Product Marketing at Automation Anywhere. Rai is a Silicon Valley veteran with more than 15 years of experience in marketing industry leading technology solutions spanning Cognitive, AI, RPA, and Mobility. Rai was previously VP of Corporate Marketing at Meru Networks, a publicly listed company that was acquired by Fortinet. Prior to Meru, Rai helped drive rapid growth for mobility solutions at Aruba Networks. Earlier in his career, he held senior positions at Motorola, eGain and Booz Allen and Hamilton. Rai has an MBA from The Wharton Business School and an MSEE from The University of Arizona.

from each customer had a different format. And that's a difficult problem that people have been trying to solve for more than 20 years. With limited success. The company found similar issues - it took them five weeks to set up just 12 customers in to the system. You have to set up a unique template for each customer. Which took 4-8 hours, and the testing and validation process was very time consuming, so they got frustrated. They came to us and bought our IQ Bot product.

PEX: And what does IQ Bot do?

Manish: It's a solution that uses AI and Machine Learning to intelligently extract information from unstructured content such as documents and emails. It's using the latest advancement in computer vision and ML and applying it in a unique way to solve the problem of data capture. The thing that makes it very different is that we've designed it to be used by the end user. You don't have to be programmer or a data scientist to leverage the power of AI. OCR solutions, data capture - they still require experts to come and set it up. Business users can simply go in and select a pre-trained domain, which is a type of document or email communication that IQ Bot is pre-trained to

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understand, inside IQ Bot, point and click to pick fields you want to extract, and then give it a set of 100, 200 sample documents. What they found is that the set up time was cut by 75% compared to other data capture solutions. IQ Bot was much easier to use and much easier to troubleshoot. In five weeks they were able to set up 50 customers at four times the pace they were managing with data capture that they were using previously.

PEX: If you don't need a data scientist to do this, is this a direct response to the skills shortage?

Manish: Absolutely. There's a shortage, and data scientists are very expensive - the best ones have been snapped up by Amazon and Google and they pay top dollar. For a typical enterprise, they'll get a consultant or someone with limited skill sets. Most businesses typically can't afford to hire a high quality data scientist.

> **'Data scientists are very expensive - the best ones have been snapped up by Amazon and Google and they pay top dollar. For a typical enterprise, they'll get a consultant or someone with limited skill sets. Most businesses typically can't afford to hire a high quality data scientist. '**

PEX: But culturally how was it for the people to train a robot to do their job? How easy was it to persuade them that this was a good idea, or was there resistance?

Manish: Most of the companies we're working with, we find that very few people are getting impacted by automation. A few people re-skill themselves, learn RPA, become automation experts, and become much more marketable. And you find there's a tremendous backlog of stuff people haven't been able to get around to, through automation people are able to take on new projects that have been overlooked for years with the extra bandwidth. In a recent

survey we found that less than 2% get impacted, and they are the ones unwilling to change and unwilling to learn. Anyone who's willing to embrace change, automation is great for them because they are happier in the end.

PEX: People have to be as open to change and transformation as the businesses they work for?

Manish: People see this threat, and either embrace automation, become experts or have trouble surviving.

PEX: What are the positive changes that IQ Bot has been able to bring to your customer?

Manish: Cycle times are down, accuracy is up and they've redeployed 20 FTEs in a six month period. This is just one process. They're now looking at expanding. Many customers, more than half of them are starting in invoice processing, and then they move on, because there's a tremendous inefficiency when it comes to processing invoices.
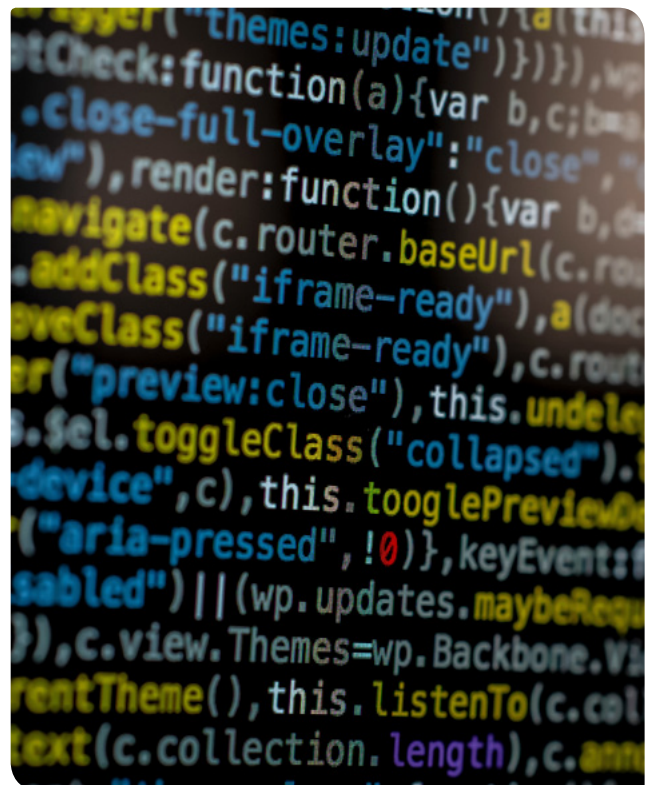
LET THE BOTS DO THE LIFTING:

How automation speeds up processes, increases accuracy, and gives people opportunities

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PEX: So automation lifts the weight off people and lets them do more interesting things? What's the process for taking the next step?

> **'Early adopters will get the bots installed but if you want to get really serious about it, you can't make the step change without data analytics. '**

Manish: When you're building bots, analytics becomes very important. You can measure the cycle time through the automation, you can measure the volume spikes in real-time and start anticipating spikes and prepare for that. If you are serious about RPA and want to move beyond a pilot, and RPA with embedded analytics is a must. With Automation Anywhere Enterprise RPA platform every bot comes with an dashboard that is auto created. And the business data flowing through the bots is rolled-up into a Center of Excellence (CoE) dashboard. With the CoE dashboard you can know the number of robots, the dollar volume flowing through the system, the hours saved, and so I think those are the really big trends.

Early adopters will get the bots installed but if you want to get really serious about it, you can't make the step change without data analytics.

PEX: Thinking about the human side of all this, what should we be doing to make sure we're still employable as the robots take on more and more of our work?

Manish: One predictor of success is having a growth mindset. We need to be lifelong learners and not be afraid to fail, I think. That is what we need moving forward. Our jobs are going to change over the next few decades, and we need to be willing to embrace that change. What's not going away is social skills, EQ skills, collaborating with others. Those are the areas where people need to grow and learn.

PEX: What are you changing? What are you learning?

Manish: I've had curiosity all my life. I've worked in many transformed industries. I feel I'm quite adaptable, and being able to change has served me well. IQ is not a predictor of success; more often we see that grit and determination are what ultimately decides your fortune in the long run.
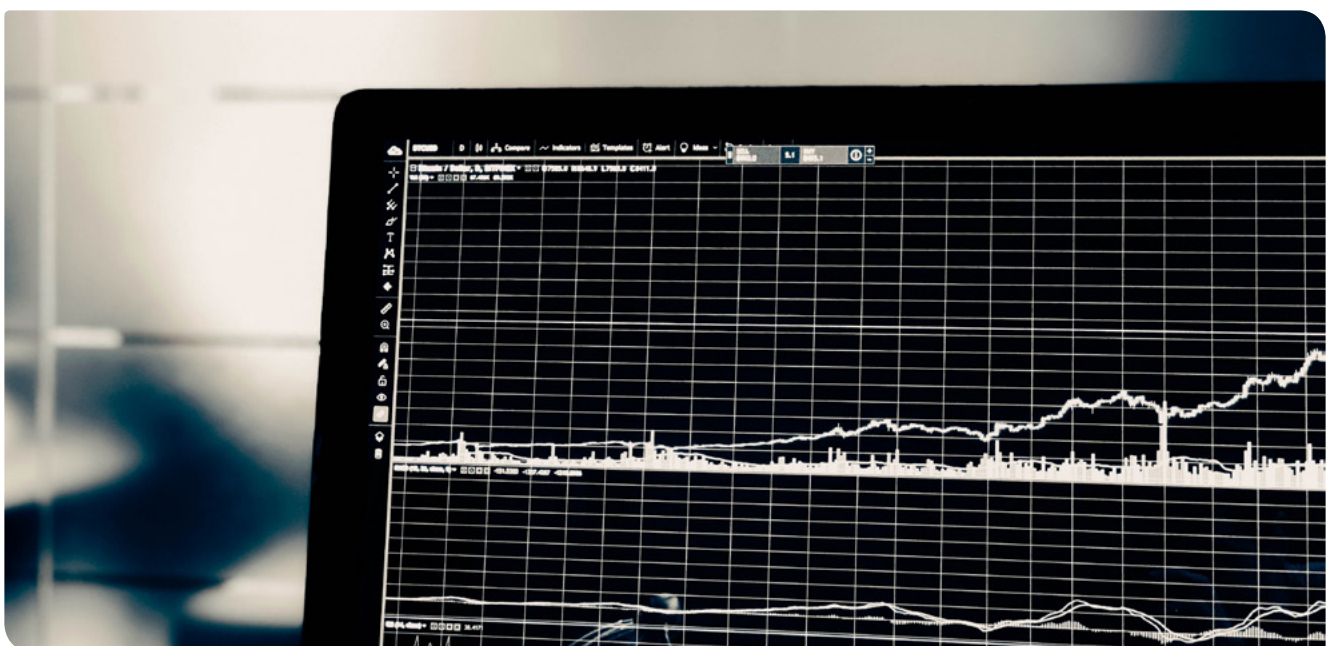
MARC WOODS ON RESILIENCE

Marc Woods is a Paralympic gold medallist, coach and leadership advisor. He has also scaled mountains in Nepal, an experience that has enabled him to cross over his experiences in elite sport to other fields. PEX Network asked him about how resilience in a time of unpredictable change is a mindset we can nurture.

PEX: Marc, you've consistently run towards challenges, rather than away from them. You're clearly someone who likes to step out of their comfort zone.

Marc Woods: That's true, but I do tend to pick the challenges I'm going to embrace! I chose to take up mountain climbing; the challenge I had to face was having a leg amputated when I was 17.

PEX: We often feel we're not in control of our circumstances – what was your response to losing a leg?

Marc: I got back in the pool. Within six months, I was faster with one leg than I had been with two.

PEX: Would you say that businesses are either physically resilient or not?

MW: There's no doubt that having lean, profitable processes in place is good news for a business in an unpredictable marketplace, but it's not the whole story. Just as some people are more physically robust than others, my limited mountain climbing experience has shown me that resilience is as much in the mind as it is in the body. Have I been the fittest person heading up the mountain? Probably not. But I do have the benefit of having been through a world-class training programme in preparation for elite sporting events. Along the way I'd learnt some useful tips and techniques to get my mind in the right shape to take on tough challenges.

PEX: So resilient businesses can survive even when their finances aren't in great shape?

Marc: Survive, but not thrive. So you have to marry up the two. Preparation for things you can foresee helps you stand firm for those challenges that you can't. Giving yourself a buffer is absolutely crucial, and it's the difference between being on the podium instead of merely in the race.

Marc Woods
In his book, Destructive Goal Pursuit, Christopher Kayes looks at the downside of not reflecting on ambitious goals. He compares tragedies on Mount Everest, where individuals can be blinded by a lifetimes calling, with the less calamitous, but nonetheless life altering, consequences of not carefully checking that pursuit of your dreams doesn't turn into a nightmare.

On the mountain, there were people of different levels of fitness. Not everyone reached the summit. Were those of us who did the fittest? Maybe not – but we were all fit enough.

PEX: A lot of the businesses we speak to are figuring out how to adapt to the changes brought about by technology.

Marc: Yes, and the quicker the better. I'm not an advocate of always being an early adopter, but where you're hearing success stories from other people doing things differently, you have to ask whether you can join them sooner rather than later.

PEX: Even if things are going well at present?

Marc: If things are good now, then you're in a better position than a business that leaps into a change to avoid failure. When change is inevitable, you don't have the luxury of dwelling on how good the old times were. They're gone. Figure out how you are going to thrive in the brave new world.

PEX: And once you've set your sights, you need to work out the steps to reach your destination.

Marc: Exactly. You need to break it down... There are lots of analogies and clichés for this. Take stepping-stones, don't try and eat the elephant in one go, and all the others. But clichés are clichés for a reason. Decide what you want to achieve and break the process down into manageable steps.

PEX: That seems straightforward! What are the obstacles to just getting these things done?

MARC WOODS ON RESILIENCE

Marc: Embarking on this journey is easier said than done. Not everyone is going to share your vision. When I was at the edge of my endurance, on a mountainside or in the pool, I would say to myself: Keep your head down. Stop meandering around feeling sorry for yourself and wondering when someone is going to help. Get your head down, get on with it.

PEX: One foot in front of the other… sounds like it's just bulldozing through.

Marc: Yes, but again it's more about what your inner monologue is telling you, rather than sheer physical fitness. The biggest challenge for me was the false summit; there's a phenomenon in the mountains where a climber fixates on a given point as their end goal, only to find out upon arrival that they have some way to go to reach the true summit. It's a bit like focusing on reaching the toilet door as you dash for the loo and relaxing as you reach it, only to find it's already occupied….not good.

PEX: The problem with focus, though, is that things are happening on such a big scale. Don't you think that sometimes you're at risk of missing out on the bigger picture?

Marc: Yes, and this is why I'm a big fan of distraction. This might sound like it contradicts the previous point, but every now and then you need to get distracted. Not to the point of being rooted to the spot, but enough to ease the tension. Spend some time with the family. Take a look at the view.

PEX: Let's broaden this out a bit. You've talked a lot about personal resilience, but what about building resilient teams?

Marc: I won gold at the Paralympic swimming relay. There's a lot to be said for achieving a personal best, but when you're on a team you have to look out for the other people as well as yourself. There can be a very fine line between weaker members feeling empowered to be their best and being discouraged by others who are adapting to the change more easily.

PEX: So supporting others has to be a key part of the strategy?

Marc: Yes – if the business fails, there are no winners. Remember none of us will ever be as strong as all of us' - what goes around comes around and a culture of peer group support has time and again proved to be the best way for a team or business to extricate itself from the mire.

PEX: So the same is true of a group as it is of an individual; know when to have your head down, know when to look up.

Marc: I'm a big believer in celebrating success. When you have been working all hours to reach your goal, and you know before too long you'll be doing it all again, you need to celebrate success. It's part of the review process and a chance to think about what has worked for you and what hasn't.

PEX: Your Paralympic experience has obviously taught you a lot. But what's your biggest learning from mountaineering?

Marc: I think a lot of shaming hangs around knowing when to quit. Again, this is more about mindset than physical ability. Being able to wring the last amount of physical and mental energy out of your self is a skill, but to do it at all costs is pointless. Know when to call it a day, when to quit.

In his book, Destructive Goal Pursuit, Christopher Kayes looks at the downside of not reflecting on ambitious goals. He compares tragedies on Mount Everest, where individuals can be blinded by a lifetimes calling, with the less calamitous, but nonetheless life altering, consequences of not carefully checking that pursuit of your dreams doesn't turn into a nightmare.

In summary:
- **Mindset is more important than physical strength**
- **Embrace change early**
- **Prepare for the future**
- **Break your goal into manageable steps**
- **Keep your head down**
- **Get distracted**
- **Build the team**
- **Celebrate success**
- **Know when to quit**

4 ACCELERATORS ESSENTIAL TO YOUR DIGITAL TRANSFORMATION

Katherine Kostereva

Digitalization is becoming an important part of our everyday life and is no longer a supplementary ingredient to businesses. Digitalization is transforming an organization in its entirety; devising and automating business models and creating unique customer experiences. As the former General Electric president and CEO Jeff Immelt has stated, 'If you went to bed last night as an industrial company, you're going to wake up this morning as a software and analytics company.'

Katherine Kostereva
CEO and Managing Partner, bpm'online

Intelligent business process management and low-code platform with out-of-the-box solutions and templates

Technology has become a great equalizer, enabling companies to enter and disrupt industries quickly, reinventing customer experiences and transforming business models. For example, Amazon Go, Amazon's checkout-free store chain, leverages the combination of Machine Learning and IoT to enable customers to take what they want and leave the store without having to go through the checkout process.

To compete today, organizations must be able to quickly adapt to changing client needs, company needs, competitive threats, and industry trends. Organizations that want to succeed, must embrace digital transformation strategy and technology that focus on accelerating four key areas: implementation, adoption, alignment, and change.

Accelerating implementation with out-of-the-box capabilities

Historically, long software implementation cycles hamper speed and agility, often due to the need to deeply customize a solution or create required functionality from scratch. Organizations that are looking to foster new technology faster should look for solutions that can be implemented quickly using a collection of out-of-the-box capabilities, including pre-set functionality, processes, templates and integrations. Solutions and platforms with ready-made capabilities enable organizations to focus on system configuration rather than developing apps and processes from scratch.

Accelerating adoption through AI

Artificial intelligence (AI) and Machine Learning (ML) technologies enable companies to make data-backed decisions and offer more tailored customer experiences. AI and ML add intelligence into apps and business processes, to provide more value to end-users, while strengthening

internal controls. Going beyond just automation, AI allows for data-driven process optimization – providing insights into process bottlenecks and identifying the most successful process paths. Leveraging historical data to drive operational efficiency, AI is one of the primary tools to improve adoption of new technologies.

> **'Organizations that want to succeed, must embrace digital transformation strategy and technology that focus on accelerating four key areas: implementation, adoption, alignment, and change'**

Accelerating organizational alignment with cross-functional orchestration

Nothing slows down the process of change more than misalignment between departments. Digital transformation technologies should provide opportunities to facilitate alignment. Orchestrating processes and apps correctly can accomplish this goal and unify data, bridging differences or miscommunications between departments. For example, it can facilitate collaboration between sales and marketing by generating a centralized source for analytics and data. Achieving acceleration and operational excellence through process orchestration promotes efficiency and agility for organizations from all industries.

In addition, with intelligent BPM platforms that orchestrate

4 ACCELERATORS ESSENTIAL TO YOUR DIGITAL TRANSFORMATION

Katherine Kostereva

apps across departments and teams, organizations can unify their IT landscape, creating the ideal environment for company's alignment.

Accelerating ongoing change with low-code technology

In addition to out-of-the-box processes, technology platforms are embracing a "low-code" approach, which enables automation and application development with little to no programming. Such solutions also feature configuration tools and UX enhancements built for business analysts and citizen developers.

By 2020 Gartner reports that at least 50 percent of all new business applications will be created with high-productivity toolsets, such as low-code and no-code application development platforms. For companies pursuing acceleration, a low-code technology is an effective way to speed up digital transformation.

A one-size-fits-all solution does not exist when it comes to digital transformation. However, the advancements made by technology platforms can deliver the alignment and agility necessary to accelerate business transformation and growth. By bringing ongoing change into the digital transformation strategy, business and IT leaders can build proactive organizations that can easily evolve and adapt to customers' needs.

PUTTING THE CUSTOMER AT THE HEART OF PROCESS TRANSFORMATION

Debashis Sarkar

WHY ARE CUSTOMERS GETTING MORE IMPORTANT?

Are customers getting more important than ever before? Every business has needed customers, but today they are impacting businesses much more than ever before.

Why?

Firstly, even a single bad experience can negatively impact a customer's perception about a brand through the power of social media. Companies can no longer take customers for granted.

Secondly, earlier the perception about a product was largely dependent on what the company offered through such things as product, price, packaging, and what they communicated through marketing efforts. Today, a customer's buying decision will be less influenced by high voltage advertisement and more by what other users say.

Thirdly, competition can come from unexpected and unknown quarters. Uber started as car hailing service in 2009 in distant San Francisco, and no one thought it could disrupt taxi industry even in countries far away from US. Yet in Mumbai, it has impacted the traditional taxi operators. They never thought that a distant cab aggregator could kill their business. But it did. The tiny hand-full of such taxis that have survived have done so by maintaining good relationships with dedicated clients whom they serve.

Fourthly, today customers don't want to be treated as just another person. They expect personalization and experiences that meet their unique wants and needs. This is only possible when companies get to know the customer intimately and understand why they buy what they buy.

And finally, today's customers have many options and don't mind dropping a company if they don't get what they had been promised. Nurturing existing customers makes immense business sense. They not only give more business but also influence others to buy what they bought. Acquiring a new customer is more expensive than looking after an existing customer.

Demanding

Customers are more demanding today, because their expectations are being influenced by benchmarks being

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Debashis Sarkar is an internationally recognized name for customer-centricity and lean management. He is counted among world's leading lights on lean management and credited with pioneering work tools, techniques and approaches. His thoughts and ideas can be found in his 8 books and more than 70 papers authored by him.

He is currently the managing partner of boutique consulting firm Proliferator Advisory & Consulting www.proliferator.net and also the founder of Proliferator Academy www.proliferatoracademy.net . Both these entities focus on making companies customer-centric and operationally excellent.

Deb is a Fellow of American Society and Quality and recipient of Phil Crosby Medal in 2014.

created by pioneers such Amazon, Apple, Vistaprint, Warby Parker, Disney, Zappos, Ritz Carlton, Surf Air and thousands more. When customers come to buy a product from your company, they may have in mind experiences which may be from a different industry or something that they have experienced in a different context.

The connected consumer of today is used to getting things at a click of the button. They seek instant gratification and don't have patience to wait for a product or service delivery. They also don't mind punishing a company who don't deliver what was promised, naming and shaming without hesitation in the social media.

KEY POINT: Today, customers are seeking experience and not just a product.

Expectation

If you understand the 'experience as product', you can understand your customer's specific needs - which if catered to, makes them happy. Of course, it's important for a customer to

PUTTING THE CUSTOMER AT THE HEART OF PROCESS TRANSFORMATION

Debashis Sarkar

understand what to expect from a company. They can't expect a Ritz Carlton experience in a Holiday Inn Express.

What business leaders often mistake is to think that all customers deserve equal treatment. Customer Centricity is about creating value for the right set of customers - not all customers.

Automation / human balance

The challenge for businesses – which many don't seem to be thinking through – is balancing automation and the human touch.

In their effort to adopt technology, companies risk forgetting the balance that has to be kept in mind before automating interactions. Customer service bereft of humans will not work. While straight through processes may be automated, those requiring cognitive effort, managing exceptions, building connection and addressing emotionally charged moments require humans.

> **KEY POINT:** It's imperative to keep the customer at the centre of all automation efforts.

Where do the robots step in?

It's true that tools like BPM and RPA help to build efficiency into business but they also help to serve the customers. For example, RPA can help to automate repetitive activities in customer journeys done by humans. When processes are done by software robots, they not only eliminate pain points but also deliver error free customer experience. Chatbots have cognitive abilities and respond to text and voice queries of routine customer issues. Predictive analytics can help to understand customer behaviour, predict what they want, when they want and when they are losing interest. They could also trigger offerings based on customer life events and offer ways to keep the customers engaged.

AI will work brilliantly when a transaction is binary in nature and does not require critical thinking, but when there is a problem where emotions are involved robots can't help. For interactions focussed on deepening relations, humans cannot be substituted.

So, machines have lot to offer which may not be obvious to us but we should know how and where to use them.

> '**Customer service bereft of humans will not work. While straight through processes may be automated, those requiring cognitive effort, managing exceptions, building connection and addressing emotionally charged moments require humans.**'

My top tips for putting the customer at the heart of Process Transformation

Here are a few things that a company can do it put customer at the heart of a process transformation:

1. Align customer transformation effort with most important customer journeys
2. Embed emotional elements while designing processes
3. Install metrics that matter and capture the customer voice and strategic aspiration
4. Employees should have a line of sight about how their work impacts the customer
5. Shun mindless automation – balance automation and human touch
6. Improvement efforts in back office process should be aligned to reflect primacy of customers
7. Create a shared understanding on how to meet the goals of customers
8. Top management must repeatedly communicate the importance of customers in words and deeds
9. Focus on behaviours and changing mindsets Enterprise decisions should never be taken
10. without the customer in mind

> **REMEMBER:** The marker that your Process Transformation is a success is customer satisfaction!

CASE STUDY: DELIVERING ON TIME

Giving people something that they want - but doing it faster and more conveniently - is a fail-safe business model. Can a third party reduce friction between a customer and a company? Bassel El Koussa, co-founder and CEO of delivery service Quiqup, says that he is helping to meet customer expectations that are more demanding than ever.

Bassel El Koussa
Co-founder and CEO of delivery service Quiqup

How it started

It started in September 2014, when a passionate bunch got together to launch a consumer app aimed at making Londoners' lives easier. People are busy, between work, commuting, errands, spending time with family and friends, and if you're lucky, the odd workout, there's not a lot of time left for anything else. Quiqup was founded to give people their time back. Be it groceries, medications, tonight's dinner, or the keys you forgot at the office, we created an app that helps us shop and drop anything people need, within the hour.

We created a consumer delivery company. Then we turned it upside down.

In the summer of 2015, Amazon Prime launched in the UK and the entire retail and last mile delivery industry was turned on its head. That's when we identified a gap in the market to help businesses navigate this new landscape and give them the tools they need to satisfy the new and growing customer expectations for fast and convenient delivery.

In December 2015 we launched our business services with two propositions:

1. **Quiqdash (an on-demand and scheduled delivery portal for SMBs)**
2. **Our API integration solution**

June 2016 saw the official launch of our API integration with Burger King and six months later, we finalised our partnership with Tesco. In 2017, we launched Tesco Now and in May of that year, we secured our Series B funding of £20m.

Reshaping e-commerce

The last mile is the most intractable leg of the supply chain, with 50% of all transportation costs caught in urban deliveries. Quiqup is therefore on a mission to reshape e-commerce by offering tech, tools and support needed so that all businesses have a chance to succeed in the digital age.

Retailers who want to survive in this climate have to reshape their businesses; it's no longer viable for them to rely mostly on footfall and in-store sales. Equally, it's also not viable for retailers to build their own urban delivery management software and manage fleets either. That's where we come in...

Our tech

We offer our partners innovative logistics technology and continue to iterate to make sure our service remains at the cutting edge of last mile logistics.

CASE STUDY: DELIVERING ON TIME

Underpinning our entire proposition is our core technology that optimises the movement of goods in the most efficient way possible. Using combinatorial optimisation algorithms, Quiqup's core tech is able to automatically assign drivers to jobs, reducing time and cost. Using neural networks and AI, Quiqup's core tech is able to calculate delivery time estimations. And finally using, our real time server, we are able to stream real time tracking to our customers and theirs.

> **'In a hyper growth company operating in such a high pace industry, iteration and change are inevitable. Having the right people in the right positions at the right time within budget presents a massive continuous challenge'**

Our core tech, a friendly fleet of over 2,000 drivers, and customer and data support ultimately allow us to deliver state-of-the-art logistics solutions to our customers.

The challenges

Our business however doesn't come without challenges. Given the novelty of the space in which we operate, the adoption curve is still in its infancy and finding the early adopters to embrace the importance of on-demand and same day delivery is challenging.

Furthermore, in a hyper growth company operating in such a high pace industry, iteration and change are inevitable. Having the right people in the right positions at the right time within budget presents a massive continuous challenge for Quiqup. The last mile is by far the most inefficient leg of the logistics journey, hence our operations need to be extremely optimised and building density is a prerequisite. Doing so takes time - structured operational processes need to be put in place, modular tech steeped in algorithms and neural networks need to be built and iterated upon, and a support staff need to be armed with the right messaging to take our proposition to the world.

Where we go from here

Today, Quiqup's delivery management system reimagines last-mile logistics in three cities - London, Dubai, and Manchester - streamlining the movement of goods for cities and the businesses that operate within them. Our end-to-end solutions enable businesses of all sizes and industries to power the on-demand and same-day deliveries that consumers expect.

Retailers all over the world are feeling the consequences of increased consumer expectations for fast, convenient deliveries as more and more shoppers shop online. And while consumers are looking increasingly online for their shopping needs, we want to live in a world where we value, variety, and quality abound in a thriving high street. Our solutions will help empower businesses across the spectrum to build the services they need to keep their doors open - a cause that crosses boundaries and geographies.

What we learned from this journey is complex yet, when it comes down to it, quite simple. Building a company takes courage and conviction. My co-founders and I share a strong set of values - innovating at speed, liberating businesses, empowering everyone, and ultimately, driving impact. There have been and will be setbacks, my suggestion - be humble and seek expert advice where necessary. These are still the raw ingredients of our company and the reasons behind what we do.

BATTLEFIELD TO BOARDROOM: FINDINGS OF THE COMBAT LEADERSHIP STUDY

William A. Cohen, PhD

Leadership is, it is said, undergoing changes in the face of digital transformation. But while the business environment may look very different, human nature – of which leadership is a part – remains the same. Leaders have to adapt to circumstances, but not at the expense of their own humanity. A new landscape is all around us, yet the fundamentals of leadership – and in particular, leadership under challenging circumstances – remain the same.

There are many challenging conditions for leadership of course, but for an environment of leadership which might encompass the extremes of human experience, it's hard to beat the almost daily challenges of combat on the battlefield.

Peter Drucker, my teacher, mentor and friend, never saw the battlefield (he fled Germany in the 1930s, settling first in England where he re-met and married the young lady who became Doris Drucker before relocating with her to the United States in 1937). Being beyond military age by this time, he served the U.S. Army during WWII in a civilian capacity but as the first graduate of the PhD program that Drucker co-developed, I applied his methods and rose to become a general in the US Air Force. Drucker, as a student of leadership, often looked to military figures for examples of the art of leadership where it matters most, and my own work followed a similar journey, frequently with contemporary sources.

Battlefield leadership presents the greatest challenge

As Drucker pointed out to me, in no other occupation must leaders make more important decisions, based on limited information which frequently cannot be verified.

The battlefield is an environment in which business motivators such as high pay, good benefits, and job security aren't usually effective. And in leading under terrible conditions, successful combat leaders build and lead organizations which get things done ethically, honestly, and for the most part under the circumstances, humanely.

Such leadership is not manipulation. Nor is it being 'a good egg', an autocratic leader, a theory Y leader, or adopting or avoiding a certain leadership style, no matter how popular, or

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Bill Cohen was the first graduate of the PhD program that Peter Drucker co-developed at what is now the Masatoshi Ito and Peter F. Drucker Graduate School of Management. Graduating and becoming Drucker's friend, he applied Drucker's methods and rose to become an Air Force general and the author of more than 50 management books published in 23 languages. He is the President of the Institute of Leader Arts which offers a unique corporate training program based on Drucker's methods.

how effective. Leadership very much depends upon timing and situation. Some call General Patton a toxic leader, yet military analysts say that he suffered the lowest casualty rate for his successes when compared with any military commander on either side during the Second World War.

Lessons that are still the basis of leadership success

In my Combat Leadership Study, I sought subjects who had not only led in battle, but also had gone on to demonstrate successful civilian careers in non-military activities. My sources included a survey of more than 200 former combat leaders and semi-structured conversations with hundreds more who had become successful in non-military organizations after leaving the armed forces.

I wanted to know:

• **What they had learned from leadership in battle?**
• **What tactics were used?**
• **How important was their style?**
• **What are the most important actions a leader can take?**
• **How can these lessons be adapted in their civilian careers?**

Ninety-five percent of the responses I received boiled down to only eight principles, one or more of which they credited with helping them to achieve extraordinary results in their careers.

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Later, I interviewed and reviewed the actions of other successful senior business leaders, most of whom did not have combat experience in the armed forces. While their leadership principles differed from each other, they invariably included some version of the eight responses I had developed from my earlier surveys.

Rounding off the study with 7,000 years of recorded history, an abundance of evidence supported most of the principles which I had uncovered.

Over the many years of our friendship, and through his own published work, Peter Drucker had much to say on each of the eight principles. Below are Drucker's comments on the results of my study which are explored more fully in my first book, Drucker on Leadership (Jossey-Bass, 2010).

1 Integrity First
Drucker told me: 'A leader can be well-liked and popular and even competent and that's all well and good, but if he lacks integrity of character he is not fit to be a leader.'

Drucker had written in one of his books: 'Character is not something you can fool people about. They may forgive a person for a great deal: incompetence, ignorance, insecurity or bad manners, but they will not forgive a lack of integrity.'

2 2. Know Your Stuff
'This seems obvious, but some managers do try to cut corners rather than mastering the knowledge that they must have and that is essential to the quality of their performance.'

Drucker wrote: '. . . leadership rests on being able to do something others cannot do at all or find difficult to do . . .'

3 3. Declare Your Expectations
'If you mean that a leader should declare his objectives, his mission --- by all means.'

Drucker was a firm believer in the power of stating a plan of action to make an idea concrete. As he would frequently say after a seminar: 'Don't tell me how much you enjoyed my seminar - tell me what you are going to do differently on Monday morning.'

4 Show Uncommon Commitment
'The failure of many is because they show no commitment, or commitment to the wrong goals. This gets back to your third law. Commitment comes from a worthy mission and then strong commitment.'

'Nonprofit directors tend to have a personal commitment to the organization's cause. Few people sit on a church vestry or a school board unless they deeply care about the religion or education.'

5 Expect Positive Results
Although Drucker warned against being automatically optimistic to the point of ignoring hazards, he agreed: 'One cannot be negative and succeed in anything.'

Elsewhere, Drucker wrote: 'Whenever you see a successful business, someone once made a courageous decision.'

6 Take Care of Your People
'Many managers are failing to do this, and it will catch up with them.'

Drucker wrote: 'A leader has responsibility to his subordinates, to his associates.'

7 Duty Self
This point requires some further definition: the leader has a duty to accomplish the mission and a duty to take care of those to who he or she was responsible. The leader's own needs must come only after fulfilling this duty.

> 'The battlefield is an environment in which business motivators such as high pay, good benefits, and job security aren't usually effective.'

'This should be the basis of all leadership. The leader cannot act in one's own interests. It must be in the interests of the customer and the worker. This is the great weakness of American management today.'

BATTLEFIELD TO BOARDROOM: FINDINGS OF THE COMBAT LEADERSHIP STUDY

William A. Cohen, PhD

Drucker wrote: 'Douglas MacArthur... built a team second to none because he put the task first... He was also unbelievably vain, with a tremendous contempt for humanity, because he was certain that no one came close to him in intelligence. Nevertheless, he forced himself in every single staff conference to start the presentation with the most junior officer. He did not allow anybody to interrupt.'

8 Get Out in Front

Drucker wrote: 'The human being himself determines what he contributes.'

'The leader must be where the work is the most challenging. During World War I, the deaths among higher ranking officers was rare compared with those they caused by their incompetence. Too few generals were killed.'

Not every leader will follow all eight of these principles, and you cannot stick a pin in this list to randomly find yourself a fool proof strategy to get you out of any situation. What would Drucker's response be to the explosion in technology, data and automation that is the daily diet of today's managers?

Drucker felt that managers sometimes depended too much on quantitative models leading automatically to the correct solution of any managerial problem when they should have used their own gut feelings. Not that the results from these complex automated systems should be ignored, but that the manager should interpret these results in the same way that a general might interpret intelligence on the movements of a hostile force.

These eight principles are, I feel, eight iterations of what has been called the 'Drucker Difference', eight ideas distilled by the forces of leadership under extreme stress testing.

The real 'Drucker Difference' which causes his ideas to go on and be adapted years after his death and will no doubt cause them to continue out into the future is quite simple. Drucker rejected the idea of being a guru or managing by an infallible gimmick; rather, Drucker taught us to think.

His latest book, Peter Drucker's Way to the Top is published by LID, 2018, and syndicated.

 Further reading:

A Class with Drucker: The Lost Lessons of the World's Greatest Management Teacher by William A. Cohen (AMACOM, 2008).

Drucker on Leadership: New Lessons from the Father of Modern Management by William A. Cohen (Jossey Bass, 2010)
Drucker on Marketing: Lessons from the World's Most Influential Business Thinker by William A. Cohen (McGraw-Hill, 2012)

The Practical Drucker: Applying the Wisdom of the World's Greatest Management Thinker by William A. Cohen (AMACOM, 2013)

Peter Drucker on Consulting: How to Apply Drucker's Principles for Business Success by William A. Cohen (LID, 2016)

WILL WHITEHORN: INNOVATING TO THE STARS

Will Whitehorn has held key leadership roles in innovative and disruptive businesses on a grand scale: since handing over the position of President of Virgin Galactic, his interests have included online estate agency Purplebricks, transport group Stagecoach, and an art gallery. Will has recently been appointed to the board of the Royal Air Force.

Will Whitehorn
Will Whitehorn is a former President of Virgin Galactic and today sits on the board of the RAF, among other businesses from tech to an art gallery.

Given his background at the cutting edge of implementing new ideas, PEX Editor Ian Hawkins wanted to know: what's the difference between invention and innovation?

Will Whitehorn: Innovation, at the heart of commercial enterprises, is in business plans. Technological inventions tend to follow to fulfil the plan.

Isambard Kingdom Brunel's Great Western Railway was innovative, but all the innovations were designed to fulfil what Brunel saw as a simple challenge – getting people from London to New York faster and more easily. He designed an Act of Parliament to get a new railway built, and for that railway to end up beside an iron boat with a screw propeller which would get people to New York.

Brunel was taking technological ideas that largely existed, and then applying them to a disruptive business plan.

PEX: So with Purplebricks, it's innovation first and invention second?

Will: Purplebricks is a very innovative company, but there's no invention in it. The innovation was in the business plan, which leads to a genuinely disrupted market.

The invention is the concept which is wholly new and it's usually a technological invention in terms of something physical, be it a new type of computer, or a new type of microchip. Usually inventions themselves lead to nothing.

Inventions come on the cusp of a new material technology that will make that invention work.

PEX: Glad you mentioned Brunel, I've just finished a piece on explaining Blockchain to Adam Smith. So invention is a means to an end?

Will: Sometimes, but often inventions don't have the impact you expect. The first railway in the world was built to carry coal. Within nine weeks, the coal was back on the canal, because the railway was making too much money carrying passengers – the space tourists of their day.

PEX: Let's think about space, as you've brought it up. Automation is the big story for us in process excellence. I wondered how much automation you saw in your time at Virgin Galactic?

Will: In terms of the spaceship – very little. It is a manually flown space ship and remains so to this day. There is huge resistance to the idea of an unmanned vehicle carrying people up as space tourists.

PEX: What is that resistance? Where does that come from?

Will: They wanted to know there's a pilot on board. And as it turned out, at the time we developed Virgin Galactic, it was more effective to use a human being rather than a computer to fly it.

PEX: Has that situation changed?

Will: It will change, there's no doubt about that. It's changing with cars and aircraft, but it's changing slowly and patchily. There's an element of human psychology. We're using human beings to fly aeroplanes, not because we need to, but because of the human psychology and the time lag it takes for regulation to catch up.

Things will change. The age of autonomy and AI in transport is upon us.

PEX: So is that the next innovation? We're being softened

WILL WHITEHORN: INNOVATING TO THE STARS

up with the automated check out in supermarkets, and the next thing is we'll be happy to get on a transatlantic flight with no pilot.

Will: I think it will come at some point in the future. The possibility of these things happening and them actually happening are two different things.

The demand for someone who is capable of taking control on a transatlantic flight will be with us for at least another generation.

PEX: Guy Kirkwood, who's a fairly regular contributor to the debate and speaks at a lot of our events, often talks about this idea that technological change can only walk through the door when it's being held open by culture change.

Will: I completely agree with that. Innovation is a combination of invention and culture that gives more utility to someone than what existed before it. And at the same time the person who puts it forward can make money. You get innovation obviously in the space sector, in the military, and that is again due to needs.

PEX: Will, you're a business leader and a communicator, and one of the things I'd like to ask is what responsibility to business leaders have for communicating their ideas to their people?

Will: A lot more than they take responsibility for! You have to find a way to quickly and effectively take people with you on a journey. Business leaders generally have not yet entered the world where they are able to do that. Even, and maybe especially the ones in what are considered the most advanced communications businesses in their era. Nobody has been more wrong footed than Mark Zuckerberg for example.

PEX: Mark Zuckerberg is an interesting example there because that's caused a lot of harm to the Facebook brand. Building brands like Purplebricks, and harking back to your time at Virgin, what is it to you that makes a brand – well, not bullet proof, but, - shall we say? – resilient.

Will: First answer is – nothing makes a brand bullet

proof. But a brand is much more resilient if it is exceptionally mindful to what it stands for in the eyes of the customer. The golden rules are: provide economic benefit, at a level that the customer feels they've had a quality experience and know how to deal with things when they go wrong.

PEX: I'm thinking of the Churchill quote – 'failure isn't final'. Which brings us up to date - the board of the RAF. What's AI going to mean for an organisation like the RAF?

Will: AI doesn't just mean cyber threats of the type that I know were in your head when you asked the original question. But also there's the possibility of vehicles that may be controlling themselves. They may just be set a mission, so there may be nobody to link them back to directly.

PEX: What does that mean in terms if responsibility?

Will: The RAF will have to defend the interests of the country against the legal and military use of AI by unknown parties.

> ### 'Nothing makes a brand bullet proof.'

One thing the RAF has also known is who their enemies are. We enter a world where that's less true.

PEX: Well looking around the world, seeing some of the tensions and divisions opening up in various countries and alliances falling over, do our politicians know who the enemy is?

Will: I think they're in the process of having to try and find out the answer to these questions again.

PEX: Cyber warfare has completely changed the game. So has war changed now?

Will: There are now more types of war. We could have a type of war which is more like advanced counter terrorism. You don't have to have the level of economics

WILL WHITEHORN: INNOVATING TO THE STARS

that nations need to conduct war, today you can do it on a shoestring.

Cyber warfare, if it shuts down Britain's economy, for example, is an act of war every bit as effective as the Dambusters. Probably much more so.

> **'Entrepreneurs can see the simplicity in complex things. Most of us just see the complexity in things.'**

PEX: Just looking at your career, and the list of things you're doing, from satellites to art galleries, what's the through line? What can you say about the people you've known?

Will: I think the thing that unites successful entrepreneurs is not being particularly clever, but all of them can see the simplicity in complex things. Most of us just see the complexity in things. Usually, we're academically educated to see the complexity in simple things.

PEX: So it's good to have different perspective from the others?

Will: Change has always been with us. In 1900 in the UK and USA about 20% of the whole population was engaged in one way or another with looking after horses. It only took 20 years before 0.4% of the population was looking after horses.

There is no technological change happening now that you can't find a precedent for in terms of its economic effect on a certain timescale. Most of the banks that failed in 2008, none of them had anything like an economic historian on their board who could've reminded them about the 1929 crash or Black Monday. When people become totally hidebound in looking only forwards without looking where we've come from, that's where we make our biggest errors - in society as well as business.
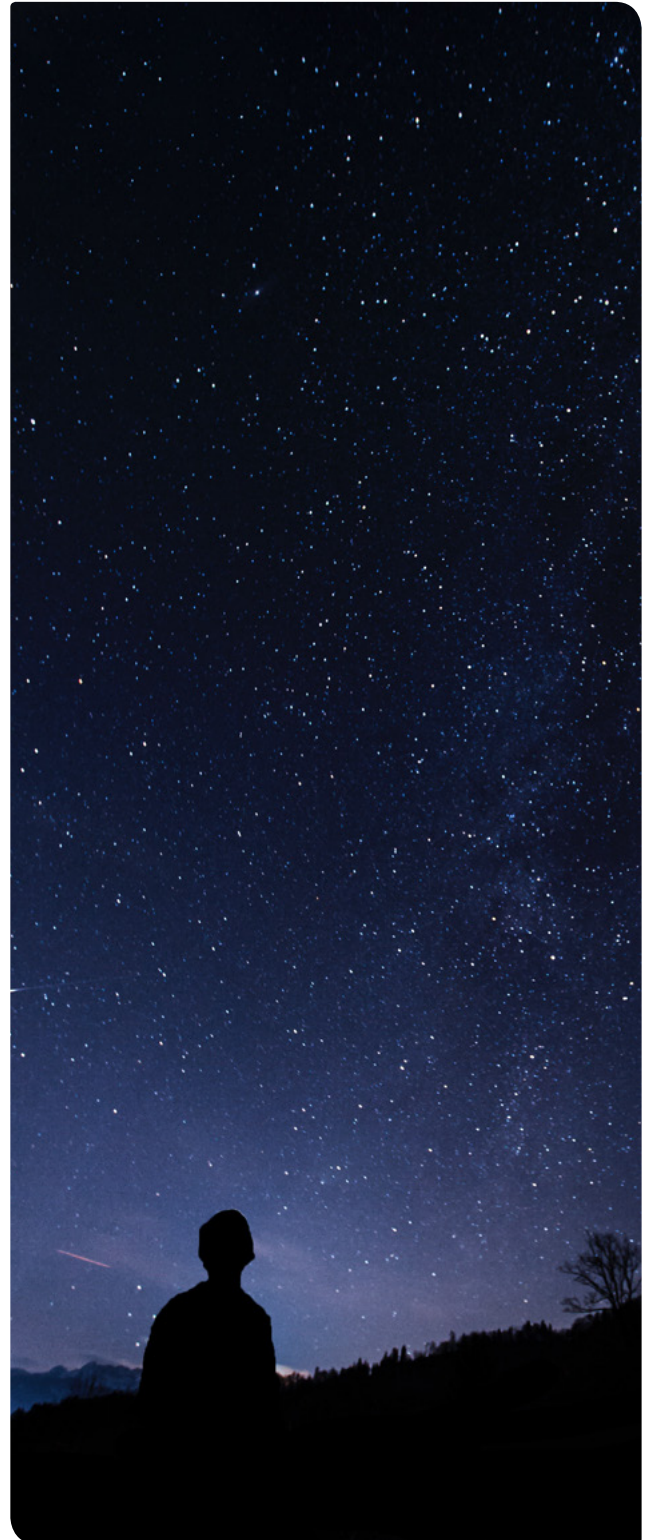
THANK YOU FOR READING...

The PEX Report is our annual look at where we are and where we are going as an industry.

It's not only an opportunity for us to tell you about the big issues; it's also our chance, through the survey, to listen. So a massive thank you to our contributors, including everyone who took part in our survey. And a thank you to you for reading it.

I'd love to know what was helpful, what you took away and what you left on the shelf. The conversation doesn't end here: follow me on Twitter and LinkedIn, send me an email or come and find me in the flesh at Opex Week, Orlando.

HERE'S TO AN EXCITING AND PROSPEROUS 2019!

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