Management: A World of Changing Perceptions
The Institute of Management Services is the primary body in the UK concerned with the promotion, practice and development of the range of methodologies and techniques for the improvement of productivity and quality, known collectively as ‘Management Services’. This embraces the disciplines of industrial engineering, work study, organisation and methods, systems analysis, and a wide range of management information and control techniques as illustrated in our Body of Knowledge.

The Institute acts as the qualifying body for the Management Services profession in the UK, focusing developments in practice and knowledge and acting as a forum for information exchange. This in turn enables our members who work under a variety of job titles across the whole of the UK economy, to make a more effective contribution to the well-being of their own organisation and to the nation’s economy as a whole.

In addition to creating and upholding professional standards for the practice of management services through the adoption of a code of ethics and the provision of a system of qualifying examinations, the Institute of Management Services collaborates with national and international professional bodies in similar fields.

The Institute is a member of, or represented on, a number of other bodies including the World Confederation of Productivity Science, the European Federation of Productivity Services, and the European Institute of Industrial Engineers.

Do you need help to improve your productivity?

We supply qualified Industrial engineers, productivity analysts, MOST® practitioners, Lean specialists.

People on contract to supplement your teams, people to undertake or manage productivity projects or to structure MOST® data.

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2020! Has it really been 20 years since we were all celebrating the start of a new millennium and concerning ourselves with the Y2K problem, otherwise known as the Millennium bug? Amazing how time flies!

2020 will provide new and challenging times for everyone. Brexit will of course, have major implications for the UK economy and the standard of living of everyone. No-one has a clear vision, a 20/20 vision, of what the future will look like post-Brexit, but the Brexiteers paint a particularly rosy picture. One thing that is certain, however, is the need to improve the country’s productivity. This should not be too difficult with the Office for National Statistics (ONS) reporting that UK productivity fell at its fastest pace in the five years pre-Brexit as a consequence of market uncertainty and the reluctance of firms to invest.

This was reinforced by Tej Parikh, the Chief Economist for the Institute of Directors, who said: “These figures from the ONS hammer home the impact that uncertainty is having on business investment. Unsure of what is around the corner, businesses’ investment in new equipment and technology that drives up their performance has been stifled. Many companies are also trimming their investment pipelines for the year ahead to build up a cash cushion in anticipation of challenging economic conditions to come.”

Even our Prime Minister, Boris Johnson, made productivity a central plank of his speech at the Conservative Party conference in Manchester, saying: “With infrastructure, education and technology, we will drive up the productivity of this country and bring it together.” However, his critics say that the government’s ‘productivity blind spot’ is our economy’s biggest threat and that Boris Johnson has no real plan suggesting how to fix it. The most recent forecasts for economic growth this year, compiled by the Treasury just a week after polling day, show an average outlook for annual GDP growth of just 1.1%, down from an expected 1.3% in 2019.

Interestingly enough, I was intrigued to find out that there is now a Boris App which provides cost and productivity information. ‘Your business in the palm of your hand’ it boasts, ‘your engineers can record installations in real time giving you and your client access to cost and productivity information, as well as data on quality checks and H&S information.’ Check it out, www.boris-software.com

What does this all mean for the Institute and the membership? In a word, opportunity! Opportunity for us to make our mark at every level – at an operational level on the production line, at an organisational level in the boardroom and at a national level by influencing government policy. By doing so, we will improve the productivity of the country as a whole which is absolutely vital for lifting economic growth and raising the living standards of everyone.

So this is really a new and exciting chapter for the Institute. We have moved into our new administrative office at South Campus, Staffordshire University, Lichfield. The accommodation is modern, fully equipped and fit for purpose for today’s challenges and for the foreseeable future. We also have the added bonus that Mrs Lynette Gill will be continuing as our Admin Manager which will provide continuity of service. I should add, that myself and the Institute membership, owe a huge debt of gratitude to Council members, David Blanchflower and Richard Taylor for making the change from Brooke House to South Campus as smooth as possible and, of course to Lynette, who has worked tirelessly on what has been, on occasions, quite a daunting and difficult transition. My thanks to all three.

Finally, can I say that all of us on Council are always keen to take onboard initiatives and ideas from members. So if there are issues that you feel are worth exploring which you consider would benefit the way we operate then please get in touch.

Dr Andrew Muir
Chairman.
The Institute of Management Services relocated to new office accommodation in Lichfield on Wednesday 18 December 2019. The new modern office is located in the prestigious Lichfield Business Village in the centre of Lichfield and is part of the University of Staffordshire Business complex. The new office is a progressive development with the Institute once again having its own office and employing its own staff.

Since 2001, the IMS administration had been outsourced. Due to the approaching end of this outsourcing arrangement, the Institute’s Council of Management decided to progress and independently occupy its own modern, ground floor, fully serviced and furnished office. The new office will serve to cater for the Institute’s increasing membership and demand for the Institute’s training and qualifications. We are pleased that Lynette Gill will continue as the Institute’s Admin Manager moving forward.

From the early 1960s the Institute’s office was based at Cecil Court in Enfield, Middlesex. In 2001, the Institute’s Council of Management took the decision to close the Enfield office and outsource the Institute’s administration function to an organisation based in Lichfield, an ideal location as it was centrally situated in the country with easy road and rail access.

The actual move to Lichfield took place on 1 September 2001 and involved much work by the then Institute Chairman Harry Downes to ensure a smooth transition to the new office accommodation.

The decision to once again acquire its own office premises and bring in house the Institute’s administration function was a bold step brought about mainly due to the Institute’s growing membership and demand for its productivity training courses.

The Lichfield Business Village provides excellent accommodation for the Institute, with a secure office located on the ground floor adjacent to the reception area. The building has its own café providing meals and refreshments. Also available is a conference room available to the Institute for meetings. Additionally, the building also has available staff parking which is a bonus for any city centre location. For visitors to the office, a public car park is only 100 yards away and the railway station a ten minute walk.

The office move has necessitated the Institute to obtain a new telephone number but the email address remains the same. All contact details are available on the Institute’s website and are as follows:

**Institute of Management Services**

Lichfield Business Village
Staffordshire University Centre,
Friary Way
Lichfield WS13 6QG

Tel: 01543 308605
Email: admin@ims-productivity.com
Website: www.ims-productivity.com
The Institute’s CPD programme

If Institute members are seeking to enhance their career prospects, they should consider continuing professional development (CPD) which is used by many professionals to develop new skills and knowledge throughout their career. CPD has become crucial in terms of career progression.

CPD is a proactive and conscious form of learning which uses various methods to help individuals either learn new skills or develop existing ones.

As the name suggests, it is an ongoing learning process. It is also a self-driven form of learning, with the individual deciding their own additional training needs. Participation in CPD offers numerous benefits to both the individual and their employer. For you as a professional, it helps to ensure your skills and knowledge are up to date, and the professional standard of your Institute registrations and qualifications are maintained. For your employer, it ensures that the company standards are both high and consistent.

Your employer will see that you are actively dedicated to the job role and value your commitment to the role. Whether you’re looking for a promotion, or you’re hoping to gain employment with a prestigious company, CPD can really help. It enables you to stand out from the crowd, with research showing that those who have undertaken CPD, have a significantly higher chance of gaining a promotion or moving on to a different area within their chosen field. Practically anything which can further your knowledge and skills is classed as CPD.

This includes:

- Events
- Training courses
- Workshops
- Research
- E-Learning

Each of the above has its own range of benefits and most professionals choose to undergo several types of CPD for best results.

The Institute of Management Services CPD programme is designed to be flexible, enabling participants to choose courses and methods of knowledge acquisition that most benefit the individual in advancing their professional development.

Details of the Institute’s continuing professional development (CPD) programme can be found on the website www.ims-productivity.com by clicking on the link at the bottom of the website home page (https://www.ims-productivity.com/).

Wondering how to reduce costs, increase capacity or improve response?

For help to address your productivity challenges, why not involve Scott-Grant. Our independent, objective and cost-effective help is valued in every business sector.

Email us at productivity@scott-grant.co.uk
Find out more on www.scott-grant.co.uk

At Scott-Grant you’re at the home of knowledge and expertise in improving productivity.
In the 1970s, Bill Dyer, the father of the two authors of this book, created a revolutionary approach to team building that has been fundamental to businesses looking to improve teamwork. Now, with Beyond Team Building, his two sons Gibb and Jeff Dyer have taken that classic model and given a much-anticipated update for the contemporary business environment. This book provides an explanation of their five-dimensional model of team building into a powerhouse guide to assessing, diagnosing, and improving teams across organisations of all types.

The book explores how to build high performing teams and how to create the culture to support those teams. This book represents the latest in thinking about creating effective teams. The authors present a new ‘Five C’ framework that focuses on the core aspects of team building. The 5Cs are

1) Context for the team
2) Composition of the team
3) Competences of the team
4) Change management skills of the team
5) Collaborative leadership style

The book helps the reader assess how their team is performing on each of the 5Cs – context, composition, competencies, change, and collaborative leadership, and discusses options concerning how to improve team performance along each of these dimensions.

The 5Cs approach can provide the organisation with the skills and means to infuse new life into existing teams. Contained in the book are a number of self-assessment surveys and intervention tools to enable the reader to build the team into a more cohesive unit.

The book includes examples of both effective and ineffective teams from a wealth of international organisations including Amazon. It covers such aspects as how to manage cross-cultural, virtual, family and alliance teams.

This book provides the next generation of team leaders and team members with the knowledge and skills they need to create effective and high functioning team.

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Title: The Effective Hiring Manager
Author: Mark Horstman
Publisher: John Wiley & Sons (2019)
ISBN: 10: 1119574323
Pages: 240

The Effective Hiring Manager is an A to Z handbook to the successful hiring process. The book explores, in helpful detail, what it takes to hire the right person, for the right job, and the right team.

It is an accepted fact that it’s the people within a company who drive success, generate growth, profit, and are critical for accomplishing an organisation’s mission. Hiring the right person for the right job is the single greatest long-term contribution to any organisation.

In his book, Mark Horstman is providing an essential guide for managers, team leaders, and HR professionals, who are tasked with hiring the talented people who will enhance their organisation’s success.

No matter how large or small your company, Mark Horstman’s step-by-step approach to hiring makes his strategies easy to put in place.

This book offers the strategies, suggestions, and ideas for hiring well, and ensuring that the most important asset of your organisation, the people, are of the highest standard you can expect. The only thing worse than having an open position is filling it with the wrong person. The Effective Hiring Manager offers a proven hiring approach and walks you through the entire process, from creating the criteria by which to hire, developing targeted interview questions, to appoint the person.

The Effective Hiring Manager is a comprehensive handbook to the successful hiring process. The book describes what it takes to become an effective manager that hires people who will lead your organisation to unprecedented success. This book will dramatically change how you view the hiring process and how you do it and as such is a must read.

Whether you are a seasoned leader or a first-time manager, after reading The Effective Hiring Manager, you will be better informed as how to hire staff that will enhance your organisation.
Microsoft’s Japan HQ has adopted a four-day workweek

There is evidence that more than half of UK workers want a four-day workweek. The relative unproductivity of working on Fridays has been a much-discussed topic for years, with many people’s weekends starting by early Friday afternoon anyway.

We also know that excessive commuting has a direct correlation with staff absences and illness. Perhaps one less day ‘at the office’ could improve both workplace productivity and rates of absence?

Recently, tech giant Microsoft trialled a four-day workweek in its Japan HQ and saw some massive benefits. Employees were not only more productive (40% higher than before), but their overall sense of wellbeing improved – with 92% of employees being happier with the four-day workweek.

One in five workers banned from revealing pay

Nearly a fifth (18%) of workers have been told they’re not allowed to discuss their pay with co-workers, according to new TUC/GQR polling published in January 2020.

The poll of 2000 workers also found that half of workers (50%) did not know what senior managers in their organisations earned, and 53% were not given information about co-workers’ pay.

Just 18% reported their workplace had a transparent pay policy, where salary details were available to everyone through an official source.

As a result of the research findings, the TUC has called for the government to commit to introducing tougher pay transparency measures, including a ban on secrecy clauses and on gagging clauses preventing discussions about pay, arguing this would empower employees when challenging unfair pay.

Frances O’Grady, the TUC’s general secretary, described pay secrecy clauses as a “‘get out of jail free’ card for bad bosses”.

“They stop workers from challenging unfair pay, allow top executives to hoard profits and encourage discrimination against women and disabled people,” O’Grady said. “Talking about pay can feel a bit uncomfortable, but more openness about wages is essential to building fairer workplaces.”

In some countries, including Sweden, Finland and Norway, everyone’s income tax returns are published and workers can find out what their colleagues earn. The European Union is considering trade-union-backed plans for new legislation on pay transparency as part of its commitment to reducing the gender pay, earnings and pensions gaps.

Poor UK internet connectivity and technology is hampering SME productivity

The average worker at a small or medium-sized enterprise (SME) in the UK could be wasting 72 minutes a day – the equivalent of two and a half working weeks a year – because of connectivity and technology issues, according to a study by internet service provider Zen Internet.

The research, conducted by Censuswide, involved 1001 UK respondents aged over 16 from a sample of employees in businesses with fewer than 250 employees. A key top line finding was that more than eight in 10 (85%) of SMEs said their productivity was impacted by an unreliable internet connection.
Decline of UK Car Industry

Over the past year, UK car manufacturing plunged a further 14.2%, sending overall production to its lowest level in nearly a decade. The Society of Motor Manufacturers and Traders (SMMT) has indicated that weak consumer and business confidence, slower demand from overseas, a shift away from diesel, and Brexit-related factory slowdowns were to blame.

The UK auto industry produced 1.3 million units in 2019, the weakest output since 2010, the SMMT said. It was the third consecutive year of declines for the sector.

The figures were released as it emerged that Ralf Speth, the long-standing CEO of Jaguar Land Rover, is stepping back from his position later this year. Under Speth’s leadership, the carmaker has been forced to shed thousands of jobs and overhaul its business amid sharp losses resulting from the same spurning of diesel that has weakened the industry overall.

Car production in 2019 was dented by a fall in both the domestic and export markets. Manufacturing for domestic car buyers fell by 12.3%, while the total produced for export plummeted by 14.7%.

“The fall of UK car manufacturing to its lowest level in almost a decade is of grave concern. Every country in the world wants a successful automotive sector as it is a driver of trade, productivity, and jobs,” said Mike Hawes, the CEO of the SMMT.

The Pitfalls of Globalisation

In the early 1990s it appeared that globalisation would lead to rising incomes for all. The then UK Prime Minister Tony Blair, dismissed those who wanted to stop and consider the merits of globalisation when he indicated that you might as well debate whether Autumn follows Winter.

The Western world’s experience in the past ten years or more past suggests that Blair was wrong. Slower growth, a financial crisis, and, in some cases, rising income inequality, have triggered a globalisation backlash. The US no longer seems willing to sponsor 21st century versions of the post-World War II institutions that helped set the international rules of the game. Instead, the White House places more emphasis on ‘America First’ than on internationally agreed norms.

Congress, meanwhile, hopes to contain, rather than engage with, China. One result has been the onset of a trade war.

To prepare for the future, it pays to study the past and by doing so we can gain a better picture of what the future may hold.

England’s inefficient centralised skills education system is not working

The Local Government Association (LGA) has called for a more ‘local approach’ to learning where apprenticeships, careers advice and business support schemes are devolved to local authorities.

England’s inefficient centralised skills and education system could leave six million people unemployed or working in a job that does not match their skill level by 2030, new research has warned.

In a report, Local skills gaps and spare capacity the LGA criticised the skills and employment system for being ‘confusing, fragmented, untargeted and ineffective’, predicting that in the next 10 years there could be over five million lower-skilled workers chasing just two million low-skill jobs – creating a surplus of three million workers.

A similar shortage of jobs for those with intermediate skills would mean an additional three million people potentially unable to gain employment at their qualification level, it said. This so-called ‘skills mismatch’ could lead to a potential loss of £120bn in economic output by the end of the decade.

Conversely, the report predicted a deficit of highly skilled workers, with just 14.8 million highly qualified people available to fill 17.4 million highly skilled jobs.

The LGA advocated for a more local approach, calling on the government to devolve all back-to-work, skills, apprenticeship, careers advice and business support schemes and funding to local authorities.

The full report can be seen at: https://bit.ly/37QjOwx
A Time for Celebration

The IMS Certificate is a four-week long course of study and is the internationally recognised qualification for productivity professionals. The course is run throughout the year by Scott-Grant Limited, either in their training centre in Manchester as an open course or in-company at a suitable venue, wherever in the world it is required.

Scott-Grant have been delivering this training for many years and each year are delighted to announce the top performers from all the delegates, based on the individual marks and lecturer assessment. There is always a varied line-up of winners and 2019 proved to be no exception. Delegates from automotive manufacturing, distribution and retail took the top accolades as the Institute declared the results.

2019 results
The IMS Student of the Year for 2019 is Laura Taylor, Lead Industrial Engineer from Jaguar Land Rover in Halewood. Difficulty in separating the next four students meant that the following people are all declared joint runners-up: Samantha Wood, Industrial Engineer at BMW Hams Hall Motoren GmbH, Chris Severn a Retail Industrial Engineer from Tesco Stores in Welwyn Garden City and two Productivity Analysts from Next Distribution in Pontefract, Todd Burton and Liam Hough who had come on different courses during the year.

Jaguar Land Rover
Laura Taylor had attended the in-company training course run by Scott-Grant Ltd in the Midlands, along with several other JLR colleagues. Laura joined JLR in 2012 after she’d done a degree in anatomy and human biology. While she was deciding what to do next her father, who worked at JLR, suggested she got a job there. So, she started at Halewood fitting rear view mirrors with her sights set on something to do with engineering. From there, she joined the industrial engineering department and had been nominated for the course by her manager, Claire Fenton, who had studied the same course with Scott-Grant some years earlier.

“The IMS Certificate course really enhances what we do as Industrial Engineers. You learn to develop skills and you acquire specialist knowledge which really contributes to the value of the business you operate in,” Claire observed.

At a celebratory event at the end of January, Institute Treasurer David Blanchflower presented a certificate and specially engraved trophy to Laura at the Scott-Grant Training centre in Manchester. Richard Taylor, Managing Director of the training provider, also presented her with a certificate and gift. Principal Course Tutors Ian Winstanley and Steve Heathcote were there, along with Lynette Gill who looks after the admin for the Institute at the office in Lichfield.

“I try hard with everything I do and to be honest, I was just happy to pass it. It was a huge surprise to know I’d won first place,” Laura said. Now, as Lead Industrial Engineer, Laura thoroughly enjoys putting into practice all she learned on the course. “Being analytical is one of my strong points” she said. “I enjoy challenging myself; I like looking at the bigger picture and seeing the impact you can have on all aspects of a business.”

For the four runners-up, their working life has already taken various turns.

BMW
Samantha Wood joined BMW as an apprentice just over a year ago, trying various logistics roles. Her Manager, Carole Shelton, who is Lead Industrial Engineer, needed her to go on the IMS course. “I think it’s important to have the Certificate” she said “and it’s given her a good grounding in industrial engineering. I’m so proud of Sam’s achievement”. Sam really enjoyed the course and is now developing her process and method improvement skills. She is also quite analytical by nature and is continuing her studies: “I’m now half way through a degree course at Aston University doing block release in logistics and operations management. It includes Lean management which is the module I enjoyed most on the IMS course” she said.

Next Distribution
Todd Burton and Liam Hough had joined Next Distribution 11 and 13 years ago, respectively, both in picking operations but had since moved into other roles. Todd worked in various roles in the warehouse operations until he was attracted to the Industrial Engineering work. Now based in Next’s sofa manufacturing plant, Todd is really enjoying applying his new found knowledge and developing his skills as an IE. “I love the practical nature of my work with Time Study. I’m now running my own project in sofa manufacturing, so there’s a lot of responsibility but I’m well supported by my experienced colleagues,” he said.

Liam Hough came to the role of Productivity Analyst after working in the control room for systems and maintenance of conveyors and belts. He saw the role advertised internally and thought it sounded interesting. “I’m not wrong about that”, said the now qualified analyst, “every day is different; it’s all interesting and it keeps you challenged and entertained.”

Liam’s line manager, Colin Hinchliffe was delighted: “Liam really came up trumps. Now, with his qualification he can do direct work measurement. For the company there are significant

Here to celebrate (left to right): David Blanchflower, Lynette Gill, Liam Hough, Colin Hinchliffe, Claire Fenton, Laura Taylor, Carole Shelton, Todd Barton, Steve Heathcote, Sam Wood, Ian Winstanley, Richard Taylor.
benefits, especially with his knowledge of the business and how operations work.” Colin passed his IMS Certificate course in 2004 at Scott-Grant, so is well aware of the demands.

Next’s Productivity Support Manager, Richard Churchill, was unable to join them in Manchester that day but commented: “The continuous improvement and time standards, monitoring and measuring, are integral to our business and that comes from the Institute of Management Services course. I’m very proud of what Todd and Liam have both done.”

Tesco Stores
Also disappointed not to join the celebration was the runner-up Chris Severn and his manager Keith Robbins (who had himself been a runner-up in 2012!) but pressures of work prevented them. Chris has been with Tesco Stores for 26 years, having first joined as a university student “to stack shelves for beer money!” After he graduated in business studies, he was offered a job at Tesco as a department manager, later progressing to Store Manager. His subsequent work in operations development for six to seven years, running projects and investment reviews, brought him in close contact with the IE dept and he liked the content of their work so much, he applied to join them. “Their work was quite methodical and that’s what I am. I like to be organised and I think it’s fair to say my life is led by data! So this is a natural fit for me as an IE. Having worked in the shops, I take it personally that they have the right hours to do the job. It’s interesting from this perspective because now I get asked the questions I myself used to ask, eg ‘Why does my shop get these hours?’ And I can set about answering them, drawing on all my experience and knowledge.”

Lead IE, Keith Robbins, was very supportive of Chris: “I identified Chris’s potential and got him on my team! He now works on the core productivity team for the UK, involved in model development and implementing change through the business, advising and consulting with project managers. He’s working on his own projects to build and develop productivity models.” He added: “Tesco people seem to learn to a high standard and the IMS course gives them a wider understanding of productivity issues.”

The industrial engineering profession
At the presentation Richard Taylor observed: “It’s great to acknowledge and celebrate the success of talented newcomers to the industrial engineering profession and you should feel proud that you’ve excelled across the world. The Certificate is a qualification that’s a basis for many people at different levels in a business, across different sectors and indeed different countries.”

He went on to comment: “IMS membership is increasing strongly; we see the age profile being steered in the right direction. On our courses we see people in their early 20s to mid 50s and they’ve often had prior involvement in other work before coming to IE. Most members are actively working in productivity. And traditionally, IEs were predominantly male roles but now it’s really evened up. Productivity is happening everywhere – you get into corners you wouldn’t normally expect to be in and your work can really add significant value to a business or organisation.”

Remarkable progress
Having learned that Laura Taylor had started work at JLR fitting rear view mirrors prompted her course tutor Ian Winstanley to present her with a further framed certificate for remarkable progress. It read: ‘This is to certify that Laura Taylor has demonstrated truly remarkable progress. She was awarded IMS Student of the Year for 2019, having joined Jaguar Land Rover Limited in 2012 to fit rear view mirrors. Since then she has never looked back!’

It all added to the fun of the celebratory spirit which continued during a special lunch at a Manchester restaurant.

Russell Currie Memorial Fund award
During 2019, readers of the Journal would have seen that the trustees of the Russell Currie Memorial Fund made an award to a newly qualified Industrial Engineer. The RCMF celebrated its 50th year in 2018 and wanted to mark the achievement of an overseas student on the IMS Certificate course that year. They repeated the award for 2019 to another student who was based outside the UK and whose first language is not English. Encouraging productivity overseas is one of the aims of the RCMF.

Karthick Kamalakkanen is the son of the owner of many shoe factories in India who supply to Danish shoe manufacturer ECCO Sko A/S. Karthick was invited by ECCO’s Productivity Global Consultant Alan Searle, to join their four week in-company course run by Scott-Grant in Indonesia in July 2019. Delegates came from ECCO’s six manufacturing countries, with India making the seventh country. Karthick outperformed everyone on the course and indeed every other delegate during the year, other than the winner and the four runners-up.

David Blanchflower, as Chairman of the RCMF, presented Principal Course Tutor Ian Winstanley on Karthick’s behalf, with a specially engraved silver plate to recognise his achievement. Ian will in turn present it in person to Karthick this summer when he returns to Indonesia to deliver a further four week IMS Certificate course to a large number of delegates.
The World Academy of Productivity Science presents its Fellowship Awards in China.

The World Academy of Productivity Science Presented its Fellowship Awards in China on 17 November 2019. The awards are in recognition of the significant and long-lasting contribution made by individuals to the world of productivity science. There are no more than 500 Fellows of the Academy in the world at any one time.

One of the Fellows inducted into the Academy was IMS President, Professor Colin Coulson-Thomas. Unfortunately, because of a clash of dates with the London Global Convention of India’s Institute of Directors, Professor Coulson-Thomas was unable to collect his award personally. However, his citation reads:

‘Colin Coulson-Thomas has been elected to the World Academy of Productivity Science by virtue of significant and long-lasting contribution to the improvement of productivity, quality of work, quality of worklife and quality of life.’

Of the current Institute membership there are five Fellows of the World Academy of Productivity Science:...
Productivity in China is falling. In 2010, China’s GDP was growing at 2.4% while labour productivity was 10%. However, eight years later, GDP is 1.5% and labour 6.85% respectively.

Mr John Heap, outgoing President of the World Confederation of Productivity Science.

Dr Andrew Muir, Chairman of the Institute of Management Services.

Mr David Blanchflower, Treasurer of the Institute of Management Services.

Dr Akbar Jafarri, Fellow of the Institute of Management Services.

Professor Colin Coulson-Thomas, President of the Institute of Management Services.

Chengdu China
Chengdu is the ninth largest city in China with a population of more than seven million. It is world famous for its panda research and breeding centre known as Panda Base. The panda is a fascinating and unique animal, and the breeding success rate of the centre is almost 100% – a high productivity level indeed. All pandas have Chinese Citizenship no matter where they are in the world.

Chengdu is also known for its spicy foods. Szechuan peppercorns are known throughout the world for their quality and taste. It is also the birth place of tea culture in China, a very ancient and fascinating ritual. Recently, it laid claim to having the biggest building in the world, the Global Center.

China – One fifth of the world’s population
There are more than 1435 million people in China, 19% of the world’s population, 50% of whom are between the ages of 25 and 54 years.

Productivity in China
Productivity in China is falling. In 2010, China’s GDP was growing at 2.4% while labour productivity was 10%. However, eight years later, GDP is 1.5% and Labour 6.85% respectively.

China’s labour productivity is also relatively low compared to other developed economies such as the US, EU and Japan; it is producing an output of $7318 per worker, below the world’s average of $18,487 and significantly lower than the United States at $98,990. As labour productivity is closely related to GDP growth, this poses a great challenge for the Chinese economy.

One of the main contributing factors to this low productivity is the build up of inventory, where production rate exceeds consumption rate. As firms that produce traditional manufacturing goods, such as steel and vehicles, as well as goods like polysilicon and carbon fibre, begin to cut down on production, prices drop, driving down revenue and lowering wages as a consequence.

Since wages provide an incentive for workers to work harder, lower wages reduce the productivity of the workers, especially
those in the lower income bracket. This causes a vicious cycle, where investors withdraw from the Chinese market, lowering wages even more, which further exacerbates the productivity problem.

**Poverty in China**
Because much of China is doing well, it is not easy to determine the full extent of poverty in the country. However, it is recognised that China is one of the top five poorest countries in the world, where one in ten Chinese is classified as poor. At least 82 million people live below the poverty line.

Part of the problem is the lack of education in rural areas which keeps families locked in poverty. Children in some southern provinces don’t have access to education and, as Ji Da, a native of Chengdu said: “We send them clothes!” Interestingly, I was stopped by some students on one of the main streets in the city who were collecting charitable donations to send clothes to the poor children in the mountains.

**How China made Volkswagen the world’s biggest car maker**
Volkswagen beat Toyota in selling the most cars in the world in 2016. Volkswagen became the biggest car maker in the world because of its growth in China, its biggest market.

**Top Car Makers in the World in 2016** (Source: Company Data)
- Volkswagen Group: 10,312,400
- Toyota: 10,175,000
- GM: 9,965,238

One of the reasons for Volkswagen’s success is that it was the first foreign car maker in China in 1984, with the joint venture, the Shanghai Volkswagen Automotive Co. When other car manufacturers were hesitant to invest in China, because of the political uncertainties, Volkswagen took the market.

Amar Manzoor, director of 7Tao Engineering said: “The reason why Volkswagen has done so well in China is because they know the territory well. They can compete directly with their Chinese competitors and present a better, more reliable image.”

**Volkswagen continues its development in China**
Just days after Volkswagen showed off its first all-electric ID.3 vehicle, produced at its Zwickau plant in Germany, it announced that it had entered pre-production in China too. The new plant will be at Anti, Shanghai, and will produce all-electric vehicles on Volkswagen’s MEB platform, a modular design that’s for battery packs of varying sizes. Production at the factory, a joint venture with SAIC, is expected to start in October 2020 and have an annual capacity of 300,000 vehicles. Volkswagen plans to manufacture another 300,000 ID models in Foshan, China.

Volkswagen expects to sell 22 million all-electric vehicles world wide in 2028, half of which are expected to be in China. The country will play a crucial part in Volkswagen’s electrification strategy, the objective of which is to be net carbon neutral by 2050.

**Technology advancement**
Although the Volkswagen/Shanghai collaboration has been a resounding success and an example of technological advancement, the Chinese market overall does not benefit greatly from such advancement. Instead it relies heavily on fiscal policies and investment growth. But relying solely on these policies and not tapping into the potential of riding the technology wave, has hindered China’s productivity growth.

Part of the problem is that there are more than 300 million farmers in China and, in order to increase their productivity, through mechanisation say, would result in huge numbers being unemployed. It is particularly evident as you travel around Chengdu, that all the green areas are in immaculate condition. This is because there is an army of workers looking after them. Above is a picture of gardeners in Tianfo Square, who are weeding by hand.

**The Great Firewall of China**
Of course, censorship in the People’s Republic of China is well documented, particularly internet and online restrictions, known by the nickname ‘The Great Firewall of China’. Banned sites include YouTube, Facebook, Google services (including Search, Google+, Maps, Docs, Sites, and Picasa), Twitter, Dropbox, Foursquare and Flikr, to name but a few.

Interesting enough, although censorship affects the whole nation, it does not affect China’s ‘special administrative regions’ such as Hong Kong and Macau. These regions are supposed to enjoy a high degree of autonomy, allegedly! However, it was evident when watching the news channel in Chengdu, that during the transmission of the demonstrations in Hong Kong the TV would go off, not once but several times. Censorship? I’m not sure. Could it just be coincidence? Perhaps.

**China a country of huge contrasts**
So, China is a country of huge contrasts. There are those who are doing extremely well, which is evident from the number of top of the range cars that drive around the city. But in contrast, there are those who still lug their two baskets of fruit, traditional style, onto the bus to their selling pitch in order to scrape a living.

Dr Andrew Muir
IMS Chairman
Those individuals who consider a career in management are often faced with the dilemma of what management actually means. The management scholar Stodgill (1974) puts it into context when he observed,

“There are almost as many definitions of management and leadership as there are persons who have attempted to define the concept”.

Business school graduates are fed the standard rhetoric of what attributes managers and leaders require for success. For instance, vision, empathy and positivity. Whilst such attributes are desirable, they are just characteristics which most people demonstrate at some point in their working careers.

As a youthful manager, I remember attending a presentation by Jack Welch on leadership at which he suggested leadership was a myth akin to those folk tales told in children’s story books. Jack Welch (born 1935) was one of the most successful CEOs of the last century. Welch argued the point ‘perception and intuition’ were the qualities that mattered in business. He also, pointed out managers required nerves of steel (the grit) to see things through to the end. This view was also shared by the late John D. Rockefeller who said:

“I do not think there is any other quality so essential to success of any kind as the quality of perseverance. It overcomes almost everything, even nature.” John D Rockefeller (1839-1937).

Both Welch and Rockefeller whilst different people were men of their times, being self driven, investing their time and money in educating people for careers in business. In Rockefeller’s case founding the University of Chicago, one of the world’s most prestigious schools of economics and business.

Returning to Jack Welch, Welch advocated that staff should not be automatically dismissed for making mistakes or failing in business. The challenge for many potential managers lies in the complexity of business and the pace of change. Failure is an essential part of business, new discovery, and encouraging personal growth. It is through failure that we learn, evolve and grow. It is important for individuals to embrace and celebrate failure as an important aspect of our personal development and discovery. Whilst failure is never welcome, reflection and critiquing one’s own performance can help build self-confidence, driving out negative thoughts and providing the self-assurance to move forwards.

The management scholar Professor Peter Drucker argued that there is no one leadership style or personality (Drucker: 1996). Drucker argued the point that whilst there may be “born leaders,” there are far too few to depend on them. Leadership must be learned and can be learned either on the job through practice based learning or in business schools or both. In the Book What They Can’t Teach You at Harvard Business School, Mark McCormack (1984) suggested:

‘The best lesson anyone can learn from business school is an awareness of what it can’t teach you – all the ins and outs...
of everyday business life. Those ins and outs are largely a self-learning process, though the experience of someone like me might make the learning shorter, easier, and a lot less painful.’

The point McCormack is making is that business schools are restricted by their own curriculums and teaching methods, (business schools, out of necessity, are condemned to teach the past). Many of the world’s most successful business leaders have never stepped foot in a business school. In line with Drucker’s thinking, leaders have some common traits; they have followers, they are results orientated, they are visible and set examples, and they take responsibility and are tolerant of diversity.

Roles, goals, and responsibilities
If we subscribe to the view that prospective managers will be future leaders, it is useful to think through what really characterises a manager and who should be considered management. In terms of what characterises a manager is to some extent determined by the level in which they reside within the organisation, and by the budget and resources under their control.

Historically, what constitutes management has been studied by scholars from various disciplines especially those associated with organisational development and economics. Alfred Chandler is regarded by many as one of the most influential business writers and his work, especially Strategy and Structure (1962) is considered an outstanding text. According to Chandler, what management is about can be deduced from the role of the manager and the structure of the organisation. The manager is a professionally trained organiser and administrator of resources. At a basic level, we can define the work of a manager as planning, organising, measuring, and influencing others.

In the 40 years between 1950 and 1990, management practice and the role of the manager was largely influenced by the growth in manufacturing and the need to provide commodities to an increasing consumer population. An important feature of industries engaged in manufacturing are typified by central command and control structures, tight performance targets and structured division of labour, where the role of the middle manager is programmed by senior management. This form was highly effective and largely influenced by scientific management based on Taylorism (1911)1. Taylorism was a management ideology predicated on production measurement and performance.

A great deal of the literature on motivation stresses the importance of providing a reward shortly after the performance so that the individual performer can clearly see the link between performance and reward, and Taylorism supports this belief. Some refer to motivation as a personal resource, influenced by the need for self-actualisation and a desire for self-fulfilment (McManus: 2006). The point here is any manager should have self knowledge of the factors which enhance or weaken the effect of motivation on their performance.

David McClelland’s (1962) research on achievement motivation led him to consider that the need for achievement is a distinct human motive that can be distinguished from other needs. According to McClelland, individual managers with a high need for achievement tend to set moderately difficult but potentially achievable goals. A characteristic of achievement motivated
managers is they appear to be concerned with personal achievement rather than with the intrinsic rewards of success. Such managers do not reject rewards outright, but the rewards are not as essential as the accomplishment itself.

One of McClelland’s observations was that diverse jobs require different types of motivation. The aim is to match the inner need with the requirements and demands of the job. For instance, manufacturing managers are often appointed for their technical knowledge and their ability to meet production targets – people who fit this profile tend to be comfortable with command and control structures. Whilst a manager working in the hospitality industry would generally come from a non-technical background and have customer facing skills focused on the needs of customers.

Managers need a motive – that is the drive which motivates the manager to take the action he believes will satisfy his needs. Managers are often confronted with the duality of satisfying both their intrinsic needs and the extrinsic goals of the organisation. According to Reece and Brandt (1993) motives are the ‘why’ of human behaviour, which are not always understood by the individual. Motives change throughout our lives. What motivates individuals early in their careers may not motivate them later on. Sometimes, individuals are not fully aware of their inner needs and forces which influence their behaviour, which is why some people fail in management.

Motives underlying one’s own behaviour and the behaviour of others are often difficult to understand. A person’s true nature cannot change with circumstances, it is often same and totally consistent. In terms of managing people, the better you know your people, the more you can get beneath the façades, and the more accurately you can predict how they are likely to behave or react in almost any situation. This knowledge can be invaluable to the prospective manager.

The responsibility of a manager is not only determined by the role they have within the organisation but equally by their relationship with others. Having responsibility for others can be rewarding but also challenging on many levels. Akin to Olympic athletes, first-class managers are a rare breed. They possess a character not only concerned with organisation goals but have a genuine commitment to people, and are pleased to promote useful approaches to improving teamwork and relationships.

Taylor pointed out that professional managers are necessary because management is about organising complex processes in large industrial firms, on the basis of objective techniques instead of customary knowledge. Whilst this was the case, the growth in small medium enterprises (SMEs) and the proliferation of service firms as changed the way managers are recruited, developed and trained. The shift from specialist managers to generalists in many ways supports the transition from an industrial economy to services. Since 2000, management has become more introspective with a focus on short term results and profits. In this business atmosphere managers may have short careers, and can be subjected to unwarranted levels of criticism and blame (Pearson: 2009).

The inroads made in management practice are apparent in the way organisations use technology and information. Information management plays a big part in the management decision making process. Managers of today are expected to be technology savvy and those who are not are at a huge
disadvantage. Many business decisions once made by senior and middle management, are now influenced by computer algorithms and decision support systems. Personnel who have experience in using complex systems to find solutions to problems are highly valued by senior management.

Characteristically, today’s managers tend to be highly dependent on a given set of skills that include:

- An ability to work with a wide range personnel from diverse backgrounds.
- An ability to mentor and develop the talents of others.
- An ability to communicate across all levels of the organisation.
- An ability to communicate in at least two languages.
- An ability to work with a range of technology and systems.
- An ability to deliver major projects.
- An ability and willingness to share knowledge.

In the context of acquiring these abilities, the manager’s most important consideration is the relationship of knowledge and expertise to the expectations of senior management, and the performance and results of the entire organisation. The career manager therefore must have a foremost concern for communication. Managers cannot be effective unless their message becomes the objective of their followers.

Coherence in management development
An effective manager is the product of their own potential, development and training. This implies that even the manager must be trained in order to fulfil their role and expectations, to senior management. In meeting these expectations managers are often confronted with challenges (some of which they could do without). Challenges are often related to operational issues or financial constraints (some of which are outside the manager’s control). Having an understanding of what might constrain your effectiveness as a manager makes sense. For instance, time is a constraint so prioritising these activities which add value to the business is imperative. Likewise, identifying the priorities of others is likely to reduce the risk of conflict when competing for resources.

A key aspect of managing is to find the right people for the right jobs. Much of anyone’s success as a manager is related to diligent resource planning, regardless of whether it is the appointment of a project coordinator for a particular project or the appointment of sales assistant. The human resource function consists of planning how many people are needed, with what skills, and at what budget is needed to undertake the planned activities. In this situation, forward and operational planning is a big part of what a manager does and should do. Although considered somewhat a cliché, the expression, ‘failing to plan is planning to fail’ is a useful maxim. A word of care though, the reality that activities need to be planned and administered over periods of time carry inherent risks which may not be known or communicated to senior management. Equally, the inflexible use of resource planning may hinder expected outcomes.

In complex business environments, learning comes from a combination of discovery, dialogue, experience, reflection, and application. No individual has a monopoly on knowledge or wisdom. The career manager needs a mentor; the problem is who best fits this role. Returning to my experience with
GE (General Electric Company), on appointment all new management entrants were paired with a mentor (that is someone who could informally advise you). The role of career mentor in GE was re-established by Jack Welch in the early 80s (as was ‘Reverse Mentoring’ in the 90s). The mentor’s role was to act as a conduit between the manager and the organisation. Providing guidance and counsel within a particular field of expertise, enabling one’s own thinking to be challenged. The payoff was increased self-awareness for the manager and for the mentor the knowledge and esteem of knowing they had helped a colleague or future business leader.

Being open about the challenges different co-workers face and seeking shared solutions to problems, is essential for the manager’s development and future progression. Being collegiate is essential to building high performance teams. Part of the challenge to initiate teamwork is the absence of direction to establish a team and to drive the work forward. Establishing a team possessing sufficient skills and expertise is one of the objectives of management. Team characteristics such as directing, cohesion, coordination and learning, are recognised as essential for team success. Some would argue that the activity of directing is more related to leading and leadership (Kotterman: 2006). Leadership in this context means the process whereby a work environment is created in which people can do their best work and feel a proprietary interest in producing a quality product or service.

Managers have an ongoing responsibility to identify the need for business improvement and set the course of action to attain this improvement. Peer managers and co-workers should be encouraged to participate in any course of action and suggest ideas for implementation. Identifying appropriate courses of action on the part of the manager is about knowledge and engagement. Co-workers are motivated and feel more ownership of decisions when they have had a chance to offer their input. In terms influencing others, this may be a question of the managers style of engagement. Many co-workers prefer to be consulted about things which affect them.

We know more today than we did a generation ago about what motivates individuals, and how managers can inspire and encourage co-workers to achieve results. The growth in service and knowledge-based firms has changed the dynamic of how management is practiced and how authority is exercised. To illustrate, I have met many ‘autocratic managers’ who exercise authority and expect subordinates to take responsibility for performing the required tasks without undue explanation. Whilst some of these managers achieved the results they were looking for many did not and were often involved in HR conflict situations. In this era, it takes a great deal of self conviction for a manager to employ this style. This, some managers start with an assumption of mutual dependence that is up to the co-worker to maintain through strong performance. This assumed some managers start with an assumption of mutual dependence then it’s up to the co-worker to maintain the relationship through strong performance.

Management to some extent is a numbers game and those that play the game need the numbers and of course a bit of luck. Managers are frequently judged on the outcomes of the decisions they make. Mintzberg et al (1976), define the characteristics of decisions as novel, complex and open ended, with decisions not so much made under uncertainty but within a continuous state of ambiguity, where almost nothing is given or easily determined. Managers often use both logic and intuition when making decisions. Statistically speaking to be ‘above the curve’, a manager needs only make acceptable decisions 55 per cent of the time. Whilst some decisions may not go, the way a manager intends, the import thing is the decision was made. All decisions are hedged about uncertainty with some being more uncertain than others.

Managers who have gone through taught MBA programmes are educated in various techniques to deconstruct problems and reach a decision which minimises risk to the business (but, not necessarily to the individual), for some managers the bigger the risk the bigger the pay-off. Complex decisions often require the manager to use a blend of logic and intuition. Depending on training and character, managers will adopt one of these approaches to the exclusion of the other. Those who occupy management positions are expected to become conversant with problem solving approaches, as they are a component part of decision making process.

Managers have greater access to various forms of information than ever before; business intranets, Big-Data, and Cloud Computing allows individuals to gather data and process information quickly and make decisions. However, technology is a double edged sword, whilst quick access to data and information is desirable, it is the quality of data which really matters. Lack of due diligence by the manager at the problem analysis stage often leads to poor decision outcomes. For instance, inappropriate forecasts made due to incorrect or out-of-date data is a prime example. Part of the problem is that ‘data quality’ efforts are competing with other initiatives and for budget and staffing provision. Managers requesting additional resources are often required to justify their reasons to senior management.

**Changing dynamics**

The terms manager and leader in the 21st century may well be considered by some to be misnomers. The terms are often used interchangeably without having an authoritative voice. Having previously talked about that, there are occasions when managers are required and expected to take on leadership roles. There are instances where leadership is not required, especially in the case of self motivated groups which may not necessarily...
require a single leader. Drucker (2007) outlines leadership as unromantic and exhausting its value and substance lies in its execution. There is a school of thought that attempts to justify blending the positions of leader and manager. A few scholars (Birkinshaw: 2010, Drucker: 2007, McManus: 2006) believe managers are not essential if workers are knowledgeable and committed to the role. The supervision offered to knowledge-workers is best provided by leaders rather than managers since such persons are thinkers who operate best as individuals, in essence, they manage themselves. Alternatively, as the influence of knowledge-workers grows, they become partners rather than salaried employees. UK retail firms like John Lewis and other enlightened companies such as Currys PC-World or Wal-Mart (US) forge partnerships with external suppliers; employees are, similarly, internal suppliers and partners to the organisation and as such, share rewards.

All organisations have at least two objectives: to create a customer and manage the future through innovation. To these objectives, we add a third which is to manage the business ethically. In these circumstances, organisations and their managers constantly encounter forces driving them to change. Because change means doing something new and unknown, the normal human reaction is to resist change. Managers must rise above this resistance and adopt innovative and efficient management approaches to remain effective performers. Managers have a duty to improve their team and cultural management skills if they hope to adapt themselves to a changing world. Overwhelmingly, current management thinking pushes the goal of getting co-workers to accept responsibility by ensuring decisions are made as low down in the organisation as practically possible.

The most common, but also the most damaging, practice in business is ‘not listening’ to the customer or those individuals who interface with the customer. Many types of problems often occur when communication is poor. For example, service personnel working with customers know a great deal about their organisation’s products and services, but there is often no routine procedure for disseminating knowledge. Making an organisation receptive to changes in business processes in an environment where change is at a low level is likely to be time consuming and costly in physical energy, emotional pressure, and cash. Transforming business and cultural practices requires the manager to act as an agent of change breaking down the barriers that exist within the organisation. Delivering change is about empowerment – that is empowering individuals to contribute in any way they can without fear or favour.

Martins (2006), describes the 21st century as an era that has changed everything we do: the way we communicate and way we work, and ‘management practices’ are increasingly based on diversity, communication, project delivery, inclusivity and transparency. As noted earlier, organisations expect their managers to work directly with their peer managers and co-workers, and with appropriate external stakeholders to ensure that their objectives are relevant to the work they do, meeting both professional standards and ethical codes conduct. Furthermore, managers are expected to develop cross-cultural communication skills and embrace diversity with an open mind and a level of emotional intelligence. One scholar McCallum (2013) advises first-rate managers have a good work ethic, as they are competent at performing their role and responsibilities, and have a propensity to engagement and loyalty. Which meet the core values of many international organisations.

Finally, as in previous times managers are still expected to provide the focus and direction for their co-workers and encourage them to attain their full potential whilst achieving the organisations objectives. As many practising managers will attest too, this is not an easy task to pull off. The dilemma of management has become more complex a problem in the 21st century. Organisations are confronted with the issues of doing things right no matter how difficult they might be. The 21st century manager is expected to be mentally resilient and physically robust. Being imbued with empathy, benevolence
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and social intelligence are desirable management qualities but they have their down sides. The complexity and 24/7 nature of business is said to be an additional burden that puts greater demands on managers. It is worthy of mention that numerous managers become victims of burnout at early stages in their careers. Stress and mental depression are on the increase, and are a major concern for many HR departments. The reasons cited as causes of work-related stress are workload, lack of managerial support and organisational change as the primary causative factors. There are implications here for those senior managers who have authority to change their organisations. Those who influence and bestow authority matters and connecting the demands of the job with the impact on business should always be a prime consideration for managers irrespective of position.

**References**

1. F. W. Taylor, “Principles of Scientific Management” was voted the most influential book published in the 20th Century by the Fellows of the Academy of Management.
2. The latest estimates from the Labour Force Survey (LFS) show: The total number of cases of work related stress, depression or anxiety in 2018/19 was 602,000, a prevalence rate of 1,800 per 100,000 workers. This was not statistically and significantly different from the previous year.

**Further References**


**About the author**

Dr John McManus is a strategist, researcher, author, advisor, speaker and teacher. Throughout his academic career and writings, he has brought strategy concepts to bear on many of the most demanding problems facing emerging economies, including global and national competition and firm strategy. Dr McManus research is widely cited and his papers have received international recognition and awards.

Flow is one of the Lean objectives. It’s about keeping things moving, reducing wasteful delays, limiting work in progress, avoiding static items, minimising handling, trying to complete in continuous cycles rather than a series of batches.

To clarify
Flow embodies many of the objectives, the thinking and the techniques that Industrial Engineers and Productivity Analysts apply in their work.
So, let’s look at the steps you should take when you need to improve flow.
- Identify the current process steps;
- get suitable time measures for each step and become aware of not just a typical or average time, but also the variation in any of the process steps eg, whether there are method, specification or other differences in the activity;
- understand the frequencies of any aspects which may occur or which may affect process step times; and
- vitally, measure the delay times between process steps which are often far longer than the added value activities;
- compare the times for all aspects of the current process and assess what capacity is required from the process. Producing or processing at the ‘right demand level’ is important: too much available capacity and/or imbalanced processing may cause blockages, high work in progress and the need to hold excess stock.
- Process steps are important to enable you to identify those steps which need changes to specifications or requirements as well as for designing in principles of quality control.
- There is a tendency to think of a process as only pertinent in certain industry sectors, particularly manufacturing. In reality, every business sector has processes.
- A process is a sequence of organised events which delivers the required output, within acceptable commercial or budget terms. This should apply in all circumstances, whatever the activity or business.
- Having established the outline times for each process step, you can start to build a picture of the steps that are restricting capacity. You’ll identify any need for multiple workstations and/or multiple staffing to achieve the intended capacity. It should be clearer whether there’s a need to examine a method, process or design in order to reduce work content and therefore time. The effectiveness of many commercial processes relies on ready access to and good presentation of data.
- The required physical area will become more apparent or you may already know the physical area available (possibly with constraints) which must allow for supply feed and output removal, to allow flow and required capacity. The ‘demand
level’ will influence whether the process needs to operate nonstop or across restricted operating hours. The process may well also need to be able to operate at varying capacities to meet daily, weekly and seasonal fluctuations in demand. This may mean longer operating hours, multi shifts or at different staffing levels to achieve the required output in a specific time period.

This in turn, needs ‘meaningful times’, suitably applied with revised methods and processes for all the process steps, along with occasional activities at known frequencies. This could be the point where more accurate time measures are needed. These times are usually initially balanced using Basic Time and any non manual activities such as process or equipment times, shouldn’t need any RA%, subject of course, to how the times are used or applied.

A process is a sequence of organised events which delivers the required output, within acceptable commercial or budget terms. This should apply in all circumstances, whatever the activity or business.

Process steps with variable content and time will possibly be applied at a lower performance level to avoid flow being adversely affected when a higher process step time occurs. Then, with a reasonable balance and known times for each step, decisions can be taken about how you deal with setups, breaks, rest, tiring etc.

**In summary**

It is very important to look outside the main process time. Are arrangements in place to suitably feed the line and remove processed outputs? Too often a process cannot perform to optimum or planned capacity as the materials, data, specification or variables come into play. And if any one part of the process has interrupted flow, it will very likely impact on the whole. Once a process has lost flow and lost time, the only usual alternative is to run for more hours which is costly and wasteful.

Accurate and well structured elemental data will help to establish work content, identify opportunities to reduce and reallocate time for better flow. When that happens improvements to productivity will follow and that will bring value to every organisation – in any business sector.

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Business Process Automation: A Revolution in Productivity

By Cliff Moyce.
Productivity improvements arising from new technologies have resulted consistently in improvements in the standard of living for workers. Even when skilled craft-based jobs appear to be getting replaced by mechanised or automated assembly lines and systems, the craft/handmade industry remains and its products become more highly valued. Since the 1980’s one of the biggest areas of automation has been clerical and administrative tasks (‘business processes’) across all types of organisations and industrial domains. Rather than this evolution slowing down, business process automation is accelerating thanks to new technologies such as Artificial Intelligence (AI), Blockchain, Cloud and Big Data, and their sub-components such as machine learning and voice recognition. This article discusses how those technologies are improving productivity, quality and customer satisfaction and what differences and benefits we can expect to see in the next few years.

Brave new world?
One thing worth mentioning is the common media headline ‘robots threaten jobs’. Nothing could be further from the truth (but when did the truth ever get in the way of a good story?). For example, everything that you think you know about the Luddites is wrong. They didn’t smash weaving machines because they thought that automation would take their jobs away. Instead, they were angered by factory owners taking advantage of an economic recession to ignore agreed labour practices. Smashing machines was not a symbolic act against technology and progress but was instead a way of stopping production at mills run by those with whom they were in dispute. Luddites “were totally fine with machines… they just wanted machines that made high-quality goods… and they wanted these machines to be run by workers who had gone through an apprenticeship and got paid decent wages. Those were their only concerns.” (Binfield, 2004).

Automated production of textiles caused an enormous boom in demand for woven goods as they became more affordable and available due to significant increases in productivity. As a result, employment in manufacturing (including supply industries) grew enormously, as did standards of living. It is this fact – consistent increases in productivity and prosperity – that should be born in mind whenever we speak about the impacts of automation. Regardless of the tools used – water, steam, electromechanical machines, computers or robots – automation has always generated benefits for society as whole. In the 21st century, it is hard to imagine car manufacturing without the automated production lines implemented in the early 20th century that heralded mass production. The productivity gains and reduced prices meant that prices dropped, cars became more affordable, sales increased, and employment soared. As a result, the automotive industry is the largest single manufacturing enterprise in the world in terms of employment and other measures. The total number of people employed directly by automotive manufacturers is in excess of 8 million people; and, you can multiply that figure four-fold if you include employees in the automotive components industry (Wickham, 2017). On top of that figure of >30 million workers, you can add the proportion of jobs in the steel, rubber and machine tools industries that are driven (no pun intended) by the automotive industry. It is a truism that car manufacture has been the simplest way for South Korea to convert its massive steel production into hard cash.

Since the 1970s, the predominant area of automation in organisations has been the computerisation of administrative and clerical (‘business’) processes, with paper-based processing and record keeping being replaced by computers attached to electronic networks. Industries that have seen this happen include financial services & capital markets; law; retail; warehousing, distribution and logistics; media; healthcare & life sciences; telecoms; travel and hospitality; government & public services (eg transport, education, environmental, housing, care); and, the third sector (eg charities, development aid, disaster relief). Business processes that have benefited from computerisation include sales and marketing; customer relationship management; order-taking and matching; invoicing; transaction processing; payments processing; policy/case administration; inventory management; logistics planning and management; workforce planning; purchasing; strategic planning; risk management; contingency planning; personal productivity; workflow management; accounting; audit; reporting; monitoring & surveillance; and, compliance. The internet has made it easier to share business processes with customers, partners and suppliers - both in terms of their operation and in terms of the information they contain. It has even created a new industry in e-commerce, which is distinct in many ways from its parent industry of retailing.

The productivity gains from these 50 years of business process automation have created huge organisations with an enormous range of products, services and jobs that either did not exist before or were much smaller before the opportunities afforded from computerisation existed. The difference is due to the increased ability to scale organisations upwards once the constraints of manual processing and communications are removed. It is now hard to imagine a world without electronic payments in shops. Even harder for retailers to imagine a world without electronic inventory management, purchasing, accounting etc. It is also hard to imagine a world without the jobs that these automated processes and services have created (just think of payments companies as an example).

Beware of complacency
Quality has improved immensely, and the days of the 50%+ error rates in some manual administrative processes (such as producing
new policy documents in insurance) have become a thing of the past. Where paper documents and ‘off-line’ manual processes still prevail – eg international trade finance in banking – it sometimes feels as if 100% of cases have errors and other issues (speed, fraud, cost, etc). One great example of the benefits of business process automation has been the legal industry. Law has seen huge improvements in efficiency and productivity from process automation, paperless offices, and online collaboration tools. Legal teams are now able to work remotely from one another in real time on a single case thus increasing the capability, capacity and agility of the organisation. An expert in one country can work on huge documents held securely for a case in another country and can do so without delay and with minimal administrative support. As costs come down and the capacity of the organisation and its people increases through automation, law firms can take on more work and hire more people (the virtuous circle of networked computerisation).

However, we should not kid ourselves into thinking that all administrative processes are completely automated or automated well, currently. Far from it. Many remain semi-automated at best, with manual effort, paper, telephones, spreadsheets and emails substituting for best practice. Many processes and IT systems work in isolation and are only joined together using other processes and systems (that would be unnecessary in a good design). Straight through processing (STP) is more of an ambition than a fact in many organisations and domains. For this reason, problems of cost, quality, control, time (speed) and customer satisfaction persist. Some industries (eg financial services) are suffering from poor approaches to process automation and IT in the past. Many contain a mind-boggling number of applications and databases doing pretty much the same thing in multiple business units and functions (with versions of the same data) in the same company. The cost of such data, process and IT ‘redundancy’ is huge, not only for reasons of poor efficiency but also for reasons of poor quality, performance and customer satisfaction; not to mention risk and compliance issues that were severe enough to bring banks to their knees 12 years ago. The hope for the future is that new technologies such as Blockchain and AI – supported by Big Data and Cloud – can help re-engineer highly redundant data, processes and systems into states where current issues disappear. Not only by using good principles of process and systems design but also by using features of the technologies themselves that have thus far not been available. Eg regulatory compliance in banking suffers from extensive data redundancy which always
means lack of data consistency (there is no true ‘golden copy’) and (importantly) huge gaps in data. The recent arrival of AI based ‘RegTech’ means that banks can not only search for multiple instances of the same or similar data across all networks, databases and machines, but they can also reconcile mismatches and other issues and even derive / reverse-engineer missing data using AI principles. This could not have been done until recently (though AI has existed for many years, it needed Cloud and Big Data to allow it to work well across large organisations and marketplaces for these commercial applications to appear).

Quality has improved immensely, and the days of the 50%+ error rates in some manual administrative processes (such as producing new policy documents in insurance) have become a thing of the past.

From a customer perspective, the forthcoming technology-based revolution in business processing will come from something called (generically) ‘digitalisation’. ie access to products and services being extended to customers, partners, employees through a spectrum of small devices (such as smart phones) at one end and Cloud computing at the other end, with mobile computing, tablets, laptops, desktop computers, AI, blockchain and Big Data in-between the two poles. It is where the power of Blockchain and AI will manifest, without the end user realising (or caring) what it is that is making things so much better than they used to be. However, digitalisation is not just defined by its underlying technologies and methods of delivery; it is also defined by a philosophy of omni-channel customer-centricity, as well as excellence in ‘methods’ (ie process) design. Great digitalisation requires us to understand the needs of all customer types (‘personas’) and what types of problems those customers are trying to solve (‘journeys’) when they are accessing digital services such as trying to book a trip or pay a bill. Those understandings of personas and journeys need to be reflected in intuitive applications (apps) with the greatest amount of automation, functionality and utility possible. Then designers have to ensure that the services are available on all possible methods of access, so that someone can start a task on a phone, continue it on a tablet and finish it on a desktop computer without any problems arising from different look, feel, technologies etc. No entering the same information time and time again, or waiting for web pages to load, or being confused by different layouts on different devices.

A good example of excellence in digitalisation is the Uber ride-hailing app. More than anything else, it demonstrates an excellent understanding of the problems that consumers have with traditional taxi services (especially the problem of not knowing when – or even if – your taxi will arrive). Other good examples of digitalisation do exist, but you have to hunt hard.
for them coming from large incumbent organisations. This will be one of the biggest changes in the next few years – top quality digitalisation will become essential if organisations are to meet the expectations of clients, customers and partners. Once people see how services can be delivered in their personal lives (e.g., a single click to have almost anything delivered to their door on the following day) they will not accept anything less in their work lives. Truly understanding the perspectives of all customers and designing and building products and services in partnership with them (the ‘pull’ approach) may seem intuitive but it is not how the majority of companies work. Instead, companies have grown used to deciding what they will give to customers (a ‘push’ approach); an approach that has a notoriously high failure rate (Adams, 2010). With digitalisation now being one of the highest priorities for many organisations around the world, we can only hope for more customer-centric products and services in future, even if it is from newer companies supplanting incumbents.

Blockchain and AI
As mentioned above, it is Blockchain and Artificial Intelligence that have the most to offer improved process automation in the near future. Two other technologies – Cloud and Big Data – will be the work horses that underpin these improvements:

- **Cloud** is a form of ‘ubiquitous infrastructure’ that hosts delivery of computing services – servers, storage, databases, networking, software etc – over the internet, often on a pay per usage basis hosted by third-party providers. It offers flexible resources that can be commissioned and decommissioned quickly. Third-party services benefit from economies of scale as the underlying infrastructure is being used by many companies simultaneously.

- **Big Data** refers to large and/or complex data sets that cannot be handled for analysis by traditional computing methods but can be handled by newer AI technologies such as machine learning, deep learning and pattern recognition. E.g., data sets that include unstructured data such as web pages, emails, instant messages, images, spreadsheets, documents and notes (including free hand text).

What follows is a discussion on how Blockchain and Cloud will help move us to the next stage of business process automation.

In 2017, the UK Police Foundation reported that they believe that logging cases on the Blockchain will provide ‘significant advantages for the legal system.’
Blockchain

Blockchain is an electronic, ‘distributed-ledger’ technology that records transactions between two parties in an encrypted, secure, verifiable and permanent (immutable) way with all parties holding the same information simultaneously as blocks on the chain. Parties to information can only add new information through a consensus mechanism. The power of Blockchain is huge for allowing full process automation; ensuring security; assuring quality; and, stripping out effort and cost. In 2015, one major global financial exchange used Blockchain to remove 99% of effort and cost from its settlements process for private market investments. Blockchain also made the process 100% accurate and super-fast with the time for settlement dropping from weeks down to two or three days. In 2017, McKinsey predicted that the global financial services industry could remove $110bn of infrastructure costs in the next three years from its planned and possible Blockchain implementations (McKinsey & Company, 2017). One example of how this can be done is that when implemented Blockchain removes the potential for process failures due to different parties or processes (internally or externally) holding different information about the same transaction or event. Until Blockchain is implemented there will always be a need for a (largely manual) reconciliations process to handle discrepancies when settlement is attempted on bi-party financial transactions.

This manual reconciliations process needs to be applied to between 6% and 9% of all transactions currently, and it costs the industry billions of dollars every year. This clunky process is required because financial institutions currently maintain their own independent databases of transactions, customer information and other reference data (and often many multiples of those in a single organisation). To complete any transaction, banks need to reconcile and confirm their data with their counterparties and clients. This is a complex, costly, and labour-intensive process that is prone to error. Blockchain technologies allow financial institutions to move away from maintaining separate, fragmented databases and processes to a shared, distributed database structure that spans organisations. Other use cases for Blockchain in financial services include some processes that are incredibly labour-intensive and costly, and prone to errors and fraud. These include trade finance, cross-border payments, and, repurchase agreement transactions. Basically, anything where there is an exchange of information, documents or assets. Blockchain is also the perfect solution for slow, effortful and clunky processes such as KYC/AML (know your client / anti money-laundering) and identity fraud checks where the same information on a company or individual can be shared across multiple institutions through the Blockchain instead of every organisation running an identical, effortful, slow and expensive process for the same customer organisation. The same or equivalent processes happen in many industrial domains (eg shipping, manufacturing, and law).

Once Blockchain is implemented, the need for multiple processes (manual, semi-manual and automated) to do the same thing – and to correct errors in that thing (whatever that thing is) – is eliminated. Eg accounting, audit, reporting and compliance all become easier and cheaper and are done with higher confidence as access to the correct information simply means access to the Blockchain. Quality across the enterprise improves; the enterprise becomes more successful; and, society benefits.
Three example industries that will start to be transformed by Blockchain in the next few years are Law, Shipping and Insurance:

**Law.** The industry started from a long way back in the late 1990's with process automation generally, but many firms are now exemplars for things like paperless offices; online collaboration; and, automated case and document management. Blockchain is like gold-dust to legal firms as it can ensure that all parties on a case hold the same information at all times on a single, secure database. This change will help bring to an end perennial disputes about missing documents and evidence – a problem that results in many cases being abandoned. Support for Blockchain in law has come from several quarters so far including:

- in 2016, the US state of Vermont passed a law to accept Blockchain data in courtrooms.
- in 2017, the UK Police Foundation reported that they believe that logging cases on the Blockchain will provide ‘significant advantages for the legal system.’
- in 2018, the Chinese supreme court ruled that evidence that has been verified on the Blockchain can be used in local court proceedings.

A further application of Blockchain in law is Smart Contracts. Smart Contracts are self-executing contracts with the terms of the agreement between parties being written directly into lines of computer code held in an immutable manner on the Blockchain. Advantages of smart contracts are that they can remove the need for intermediaries in deals and can reduce significantly the effort and costs of monitoring and of issue resolution. Smart contracts in law are mainly at the concept stage with few live implementations currently (but there are some). The next few years will see the widescale adoption of smart contracts in law.

**Shipping.** Similar to the legal industry, Blockchain and Smart Contracts have a lot to offer cargo shipping and transportation in their ability to cut costs and time by removing intermediaries in the contract and settlements processes; by holding all information in a single (electronic) place; and, by having smart contracts executing automatically. The idea is being explored in cargo shipping in an IBM-Maersk Blockchain collaboration that has been running in pilot mode since 2018 (IBM, 2018). Significant reductions in transit times and costs have been reported. Multiply these potential benefits across all cargo shipments worldwide and you have an enormous saving. Then apply it to the movement of cargo by air and road and you can see how Blockchain (rather than AI) may be the real power behind the throne of automation in coming years. Firms that do not adopt Blockchain and smart contracts into their supply chain may become increasingly uncompetitive compared to their peers.

**Insurance.** The global insurance industry has become somewhat notorious over the past thirty years for failing to keep up with business process automation. Like shipping, it suffers from having too many middlemen in the process; middlemen who are often stuck on telephones and paper and unwilling or unable to automate. Online brokers for retail insurance products have
made some advances but behind the curtains it often becomes a mess of telephones, paper, spreadsheets and islands of standalone (often bespoke) IT systems. Systems for quotations (illustrations), underwriting (a prime area for AI transformation) and policy administration are usually separate. Compounding all of this is the inherent complexity of insurance, which involves business, corporate and government customers; retail customers (consumers); brokers; other intermediaries; insurers; and, reinsurers. The constant to-and-fro of documents and information between these stakeholders is a notorious source of delay, cost and errors (and compliance breaches). On top of this is the complexity of the product itself – risk. But all this bad news about technology and processes in the industry is also good news for Blockchain, which can provide huge improvements and savings. Underwriting, policy administration and claims handling will all benefit greatly. Processing times will drop; the role of some intermediaries will vanish while others will remain and also be on the Blockchain; costs will decrease as will prices; fraud detection and risk prevention will improve immensely; and, the complexities, costs and risks of reinsurance (which almost buried the Lloyds of London market in the early 1990’s) will also reduce considerably. In short, Blockchain will transform insurance, and all stakeholders will benefit.

Artificial Intelligence
As well as Blockchain, AI will also play a huge role in process automation in the near future. AI includes:

- **Machine learning (ML)** is the science of getting a computer to act without programming. It uses ML algorithms, statistical models and predictive analytics to progressively improve its own performance on an automated task, and therefore performance of a particular business process. Robotic process automation (RPA) replaces human effort in high volume repeatable tasks such as loan and insurance underwriting with the aim of making the task faster, cheaper, more accurate and more repeatable / consistent / scalable. ML algorithms build a mathematical model of sample data to make predictions or decisions without being programmed explicitly to perform the task.

- **Neural networks** (‘neural nets’) are computing systems based on the neural nodes model of the brain. A neural net is a framework of (usually layered) machine learning algorithms that work together by making connections, and thus process complex data inputs by ‘learning’ how to do so from doing so (known as unsupervised learning). Neural nets are used for pattern recognition and predictive analytics in epidemiology, fraud detection; self-driving cars; data mining; data visualisation; cyber security (eg email spam filtering); computer vision; speech recognition; machine translation; social network filtering; medical diagnoses; and, learning and playing board games such as Go, Chess, and Backgammon.

- **Deep learning (DL)**. A subset of machine learning that is typically underpinned by a neural network. DL underpins natural language processing and much of computerised image analysis; eg parsing and classifying unstructured data such as web pages, photographs and other images, emails, instant messages, social media posts, documents etc. It operates by learning data representations through feature creation rather than learning or creating task-specific
algorithms. The ‘deep’ refers to the number of layers through which data is passed and thus transformed into increasingly abstract representations.

- Natural language processing (NLP) and Sentiment Analysis is the analysis and synthesis of natural language and speech. It is used in chatbots and Intelligent Personal Assistants (aka virtual assistants) such as Microsoft Cortana; Amazon’s Alexa; and, Apple’s Siri; and, for voice to text dictation, team collaboration, calendar management, customer service and IT help-desk management tasks. Like deep learning, NLP solutions are typically underpinned by neural networks.

- Fuzzy logic is a method of ‘acceptable reasoning’ that resembles human reasoning (ie is inference based) more than it resembles the traditional Boolean Logic (true or false, one or zero) on which most computing is based. It is used in financial crime prevention for spotting suspicious patterns of behaviour across multiple transactions or events that are not obviously linked (and which human monitoring would typically miss due to scale, complexity and disparity).

Typically, an AI system will be using a combination of AI technologies and techniques; eg ML usually requires deep learning or neural nets. Probabilistic reasoning, statistical analysis and predictive analytics appears in many areas of AI science and in many of its implementations.

AI can do many things for corporations. Too many to list, but one example is its ability to combine with Big Data from the Cloud and improve the quality of planning and decision making by including huge amounts of data of all types in business scenario modelling. Thus, the process becomes informed by a universe of data that has been hard or impossible to use to-date and it becomes more automated. Patterns and correlations including non-obvious weak but statistically significant correlations will be found and considered. As the process becomes self-learning, giving it constant access to new information allows plans to be updated rapidly and new responses considered. This will be huge in disaster relief and government planning. We already have AI operating when we plan trips and get expected travel times from well-known phone government planning. We already have AI operating when we plan trips and get expected travel times from well-known phone

What does all this mean for the future of people at work? Will it be the thin end of the wedge? Will the headcount of organisations drop as the ‘robots take over’? No. No new technology has ever led to mass unemployment – far from it. It is people who benefit from technology, and business process automation is no exception. We can expect more successful organisations working more productively, providing better services to customers, and creating more jobs.

Conclusions

An easy prediction is that technology will continue, and more importantly accelerate, the automation of business processing that we have seen in the past thirty years. AI, Blockchain, Cloud and Big Data are all fairly recent arrivals and yet they will be the foundation stones of 80% of the automation in business processing that we see in coming years. Rather than thinking we are 80% done after three decades of automating business processes, we must accept that we are only 20% done and the remaining 80% will arrive faster than the preceding 20%. Quantifying (or at least estimating) the scale of productivity benefits arising from this continued transformation is outside of the scope of this article. But as those benefits will be measured in billions of dollars per annum in one process in one industry alone (ie reconciliations in financial services), it is clear that the eventual benefits will be mind-boggling. As well as financial benefits, these fully automated ‘intelligent’ business processes will also provide far higher levels of quality (more accuracy, less errors, less rework, fewer complaints, less disruption to the lives of customers); increased and easier access to information; improved security and confidentiality; less fraud; more agile organisations (able to add new or improved services quickly); easier sharing of information; and, improved planning, control and decision making.

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How to Build Superior Team Performance

The authors believe that one of the most neglected aspects of organisational development is the building of a strong team culture. There are huge opportunities for leveraging team culture in driving performance, often overlooked because of inadequate funding, poor investment of resources, and sometimes because of a disdain for adopting ‘soft skill’ development. Organisations can be steered using two key strategies towards unbelievably performance within a team and between work teams. This article will focus on how to build a strong Team culture that can permeate all levels, and the authors discuss how practical and common-sense approaches to developing a team culture can reap huge benefits for all organisations.

Team building – is it neglected or overlooked?
It’s difficult to know the difference between neglect and indifference and it is sometimes only when things are going wrong that many organisations consider the whole issue of team building and development. Team building may be considered a ‘nice to have’ activity, but not seen as a necessary soft skill requiring learning and development. In reality, most people, when they start working in a business of any size, will be rewarded for their administrative, procedural, technological and task-driven skills, rather than their team working skills. If any L&D activity is undertaken it tends to be on task-driven skills.

Building a strong and positive team culture is committed to when things radically need improving, or where there is seen to be a serious lack of team cohesion, impacting performance.

Building a team culture is too important a topic to be left to chance, yet few organisations consider it as a major driver in the development of the performance of their organisation.

Philip Atkinson & Daniel Burger
It is very easy to neglect some of the most important issues and stages of team development and suffer the negative consequences of not dealing with issues timeously.

**Never enough time**
Is there ever enough time to balance task vs team development? Many L&D (learning and development) budgets are focused on enabling people to rise quickly up the learning curve and develop their technical capability to complete a variety of tasks efficiently and effectively. There appears never to be enough time for creating and building cohesive teams that can produce outstanding performance.

**Assessing team health**
A major element of many ‘organisational reviews’ measures the relative ability to work with or despite negative relationships in and between specific functional teams.

You have probably witnessed dysfunctional teams in action, and the impact this can have on performance. It does not just affect business results, but can create a ‘negative’ culture where norms and standards are ill-defined or, worse still, defined by groups or teams more in tune with meeting their individual or collective needs, rather than organisational objectives.

**What are effective teams?**
Developing cohesive teams is central in integrating organisational and personal objectives. People bring with them a variety of skills and experiences to work, yet we fail to capitalise on these. Team leaders should know that developing the synergy of their whole team is critical if they want to achieve outstanding results. What follows focuses on what we consider imperative in team building. It is not rocket science, but managers who lead teams may not appreciate the effort that has to go into creating and building high-performance teams.

**Natural functional or task teams, and project teams?**
When we look at team building, we ask “Is this a natural work team, or a group of individuals who have been brought together short-term and then disbanded when the project is completed?” It’s important to know the difference. Task-based teams work together on a semi-permanent basis and are natural work teams. Project-based teams or groups may be brought together for that one project, and members can easily be dispersed back to their functional responsibilities when the project is completed.

You will need different strategies to develop each ‘team’ depending on their role, the degree of permanency in that
role, and whether they are tasked to work with a project and install or implement it.

To focus on how to get the best out of ‘natural teams’ and ‘project teams’, we will focus on two key issues:

1. Team maturity
2. Team composition.

We find that these two issues are central to building effective teams and improving performance. Most organisations neglect to maximise the return from adopting learning from both elements.

**Team maturity and team composition**

As already stated, very few of us work in isolation. Most of us work in teams and depend on each other, and the team, to do our jobs and achieve results. In an effective team, there should be a high degree of interdependence between team members. That being our aim, it makes good sense to look at team maturity and the dynamics that can arise, and how this can aid you in improving performance.

**Four stages of team maturity**

Let’s discuss the role you can take in shaping the building, regulating, training, coaching and developing teams and their members. In management, it is very easy to focus on the task, rather than how the task is completed. It is very easy to neglect some of the most important issues and stages of team development, and suffer the negative consequences of not dealing with issues timeously. There are four stages to team maturity, and they are easy to remember – Forming, Storming, Norming and Performing.

**Individual commitment – there’s no ‘I’ in team**

Not everyone will focus on being a great team member, simply because their preference is not to be a team player. It may be that their personality type prefers to work alone, not enjoying collaborating with others. Although you can accommodate people’s individual preferences, your role as a manager is to build a highly functioning team. One element of this is defining standards. Although one person may prefer to work alone, the task and the organisation requires people to become strong team members, not team busters.

**Training in team dynamics**

You must be alert to these personality types and how their influence can be counter to desired group performance. We can wrongly make assumptions that all strive to be team players and operate as a cohesive team. Sometimes the ambitions of the team are just not realised, because the team leader has not taken charge and shaped and built that team.

A major factor could be that the leader or manager has had little or no training in team and group dynamics. If this is the case and shared across the organisation, you have a problem, because you will be failing to build the synergies which cohesive teams can impart to the wider organisation.

**Assessing team effectiveness**

We are going to use the four-stage Tuckman model, which
suggests that when teams are initially created, they should progress through four distinct phases, leading to team maturity and effectiveness.

In reality, many teams or groups do not successfully progress through all the phases to become what we call a true ‘high performing team’. Instead, they are often only partially effective in achieving their objectives. Most people and managers focus on the ‘task’ rather than the ‘how’. If you are going to embark as coach or trainer in team development, then you will have the responsibility as team leader or manager to shape the process.

**Successful team development is not an accident**
The team cannot be left to develop accidentally. It is a process which has to be guided and facilitated by the team manager. More teams could benefit from stronger direction and guidance. Consider how much energy and time your organisation has invested in developing strong, cohesive teams. Okay, it may have devoted resources to improve CRM (customer relationship management), IT skills and specific job-related knowledge, but compare this with the commitment to actual team development. Often, this variety of development is an afterthought, yet, if completed, could have a massive impact on business performance.

So, what do you need to know to develop effective teams? A good start is diagnosing how well a team is performing – so let’s look at the four stages of development.

**Stage 1: Forming**
Stage 1 is when a group comes together for the first time or a
new team at the start of a new project. If there is insufficient investment in supporting the team to evolve positively in a structured fashion, the team will fail to develop the norms or rules for working together effectively. The team manager has control but also has to be flexible enough to accommodate different working styles, combine the experience of the team or group members, and assess how best to position them to deal with the difficulty of the task to be performed.

In this first stage, the team may not be very productive and may lack focus, which is why the direction has to be clarified and training undertaken for the team to work. Not all team members automatically behave in a strong team manner. It could be they lack direction, motivation and a coherent plan of how to work together. A team may have a formal leader with little experience in the role. Every team needs leadership, a direction and strategy for working together. Some teams just gel, but they are in the minority. What is needed is a team leader who can bring three key skills or attributes to the team: direction and focus, energy and motivation and finally, aligning all resources to achieve the objective.

Stage 2: Storming
If a group or team is floundering, you will need to progress through ‘Storming’ because there is probably a lack of leadership or direction. Intervene and provide structure. Push the team through stage 2, the Storming phase, where people openly and critically review their performance and may take the lead to improve. Often teams have to go through this stormy phase to clear the air about what is hindering performance. The reasons for groups or teams underperforming are many and include a lack of direction and clarity in its purpose. Roles, responsibilities and reporting relationships must be clarified or reworked or reassigned. Whatever is not working needs to be addressed very quickly, otherwise morale in the team will plummet, and building team motivation in the group will be difficult. The team leader or manager has to be decisive, take action and demonstrate honesty and candour in fixing what is not working. The sooner you progress this stage, the better.

The Storming stage is where you confront confusion, ambiguity, and lack of focus, to air conflicts and grievances. Team members need to be involved, engaged and empowered but, most importantly, they need firm leadership, purpose and direction. At the end of this stage, you need to put the past behind you and move onto the positive third stage, which is Norming.

Stage 3: Norming
Norming is where you actively develop standards of performance. Norms are about setting and accepting standards in the shared way we work together. Listen to every point of view, let people blow off steam and then make decisions about the direction they need to take.

Focus initially on key roles and responsibilities – who is reporting to whom, and what are the work standards by which individuals and the overall team will be judged? If this comes from the team, so much, the better. The great thing about collaboration with the team is that when you ask a team to develop work norms and standards of behaviour, they usually set higher standards than you might set for them.

1. Here are some things to do. Test others for their understanding of behavioural standards to which the team will adhere, and clarify and resolve issues openly.

2. Explore opportunities for team development and maintain a balance between the business agenda and having fun.

3. Ask the team to test new ways of working together.

A great deal of learning takes place, as the team evolves and steadily improves how they work together, and the creation of the ‘unwritten’ rules or norms, will promote a positive move forward. These positive unofficial ‘norms’ can often carry more weight than official protocols and processes. If this process is managed well by the team leader or manager, team members will work together to develop a productive and cohesive work team.

Stage 4: Performing
When you have worked through Storming and Norming, the natural progression is to stage 4, which is Performing, when positive norms evolve and are embedded, and the team will go on to become highly valued because you have coached them through to maturity. That is the Maturity model. It is well worth working with this and coaching people through the process.

Review of team maturity model
The diagnosis of team maturity can be undertaken using a variety of tools such as ‘Questionnaire Analysis’ – assessing relative symptoms of issues for resolution and other behavioural metrics based on team problem solving and decision making effectiveness, process flow and Interaction Analysis, which is what takes us to the next stage of diagnosis.

Team personality types
Now let’s move onto the behavioural roles that people can play within the team. Professor Meredith Belbin developed the concept of team types while working on special projects with NASA in the 1960s. His research suggested that an effective team needs a variety of types of styles and skills to make the team effective. An effective team is composed of differing personality types. He characterised nine special team roles, four with an external orientation and five focused internally in the team. Here we have a brief version of those roles and how they contribute to team performance. Use the analysis wisely as results can be outstanding. The correct balance of people and personality types will create a high performing team.

A team with too many Team Workers will devote too much time to testing each other’s opinion, ideas and assumptions.
[Having] too many Team Workers means you could end up managing a social club where the interests and needs of members take over to the detriment of the task.

Four team types operate effectively on the boundary of the team and include the Coordinator, Shaper, Plant and Resource Investigator. These people offer direction and are very comfortable working across groups and functions. They naturally gravitate towards external contact and relationships.

**Coordinator or Chair**
The Coordinator is the diplomat, who will chair or referee team dynamics. The Coordinator will provide structure and be supportive in moving things forward without offence. Coordinators know the right thing to do and will be fair with team members. These people are good at bringing people together, understand the administrative and task demands of the group, and generally take all ideas and opinions into account when conducting or closing off business. Most teams need a Chairperson.

If the team does not have a person who is responsible for coordination, then the progress of the group is at risk. You will have to develop people to occupy this role. Too many ‘Coordinators’ are not a good idea because they will want to organise and reorganise things and could develop a bureaucratic nightmare in the team.

**Shaper**
The next role is the Shaper, who will add drive and motivation when the team lacks focus. You need a Shaper in a team, especially if you don’t have anyone to coordinate things. Be aware that they add energy, but also create conflict when people are dragging their feet. Shapers tend to be driven by achievement, and they like to take responsibility for results. Shapers are impatient if they think that progress is slow, or people are not giving their 100%. Shapers make things happen, but too many of them in a team can create an ‘interesting’ climate and even cause hostility between people. If you have several Shapers, you will need to manage them carefully and ensure they have enough to do and are not writing their own agenda.

**Plants**
Plants are ‘ideas’ people. They are innovative, generally tend to be quite introverted, keeping their ideas to themselves. They are very much the ‘innovative professor type’ who have unique or even innovative ideas and like to break free of the self-imposed rules of the team failing to think outside the box. If you have too many Plants, the team might not progress. There may be too many ideas on the table and no one available to bring everything together. If their ideas are rejected without careful thought and consideration, the Plant may take personal exception to this and withdraw from the group. What is very common is that some groups have very few, if any, Plants within them. Generally, the personality style that contributes to Plant type behaviour is not always encouraged in organisations because they have their ‘head in the clouds’, are disruptive and unorthodox, even though their contribution is vital. Even nowadays, companies employ very few Plants.

**Resource Investigators**
Finally, we have resource investigators who are great networking people. They form relationships with a variety of people both inside and outside the organisation and generally are the ‘go-to’ person if you need something done. Their creativity and ‘can do’ nature is fantastic at forming partnerships and relationships outside the team, and they are brilliant at sourcing resources to make things happen.

So, consider what happens to the team if you have no Resource Investigators? Resource Investigators get on with things and don’t wait for the approval. If you have too many, you could have chaos, with multiple people pursuing numerous agendas. Too few will create solutions which are too narrow and inward-looking.

Managing these four externally orientated types is interesting. Consider, if you have too many or too few of each type – what dynamics will be created within the team? What happens if you have too many of one type over others? Consider the dynamics and how to manage them.

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<th>Key Roles according to Team Type</th>
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<tr>
<td><strong>Controlling</strong></td>
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<td>Completer Finisher &amp; Monitor Evaluator</td>
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**Internally Focused Team Members**
Now we are going to introduce you to five characters who are focused internally and are the heart of the team. They are Monitor Evaluator, Implementers, Team workers, Completer Finishers and Specialists.

**Monitor Evaluators**
They are good at data analysis, critical thinking, questioning assumptions, taking things apart, challenging the thinking. Like the Shaper, they can be abrasive, but at their heart is the need to assess and weigh things up and get the right answer. They will develop a depth of understanding which is unrivalled. They bring a fresh way of looking at traditional problems and display critical thinking. A team with too many will devote too much time to testing each other’s opinion, ideas and assumptions. When you eventually arrive at an answer, after...
the much-informed debate, it will be a very well thought out answer. With too few or nil Monitor Evaluators, the team could easily go down the wrong path.

Implementers
When Belbin first developed his model of ‘group personality types’ he referred to these people as Company Workers but decided to change the name to Implementers because the original term depicted staff of lower status. The emphasis is on people who roll up their sleeves and commit themselves 100% to getting things done right. Their focus is on implementing ideas – not just talking about them. Procrastination is not in their nature. Implementers are focused on getting things done and making a difference. In our experience, you cannot have too many Implementers, but you can have too few, which will mean that ideas never translate into action.

Team Workers
Highly valued for promoting team harmony, they are real ‘people, people’. Energetic and enthusiastic, they believe it’s equally important to balance task and relationships when working together. Team Workers are keen on ensuring team harmony and that the group is working well together towards worthwhile and shared solutions. They will value harmony and effective working relationships above task competency and completion.

They are vital to the team because their enthusiasm for others and optimism for the group will promote team longevity. They will know the right thing to say, put people at ease and be concerned about people individually and collectively. A word of warning, too many Team Workers mean you could end up managing a social club where the interests and needs of members take over to the detriment of the task. However, too few or no team workers creates isolation, coldness, a formality and a clinical atmosphere in the group that is not going to do much to provide energy to the team.

Completer Finishers
Completer finishers have an eye to detail and make sure every ‘i’ is dotted and ‘t’ crossed. They tend to be a little introverted and not a major focus of energy to the group – but they are vital to its functioning. It’s all very well to have Shapers braving new territory and Plants with lofty business ideas, but if the detail is not right, the whole project can come crashing down. Completer Finishers are good with sequential thinking. They will track through consequences from A – Z and ensure that all ideas are validated. They may appear to be slow, but they are displaying patience and tenacity. They want it to work.

Working with Monitor Evaluators and Implementers, they form a very strong bond to successfully implementing solutions.

Too many Completer Finishers will slow things down, and every decision will be explored in minute detail. Too few, and projects could collapse because of failure to apply due diligence.

Specialist
Finally, we have the addition of the Specialist, who is a person who adds technical input only. Specialists are available for specific input and producing technical input. Too many specialists can result in a stalemate, a zero-sum game with

Not everyone will focus on being a great team member, simply because their preference is not to be a team player.
discussion and debate but no decisions or actions taken. Too few and you don’t reap the rewards of precise data, leading to project failure.

**Summary: team maturity & team composition = team effectiveness**

There you have it. An approach to exploring team effectiveness using two major models.

- Team maturity and team composition are critical.
- The Team Maturity model using the four stages is extremely powerful. Too many teams in many sectors and organisations do not achieve a high state of team maturity and effectiveness. Assess the effectiveness of your own teams’ organisational performance. How does this compare with what they are capable of achieving? Could they function at a much higher level?

- Team composition and team personality types and interaction analysis demonstrate that we could achieve more by focusing on assessing personal strengths and interactions and whether they are utilised effectively in group working and problem-solving.

Knowing and working with both approaches is critical in understanding the dynamics behind a team’s performance. If you have a specialist project composed of people from a variety of functions, locations and specialisms, you have to manage the dynamics of the team managing personality differences and interactions. We find training people in understanding their ‘type’ and how they contribute to a team is fundamental to effective team performance.

- You will quickly be able to identify whether and why teams are working well. Combine the thinking of team types with team maturity, and you have a very powerful set of tools for managing exceptional team performance and culture.

**Four team types operate effectively on the boundary of the team and include the Coordinator, Shaper, Plant and Resource Investigator.**

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**About the Authors**

Philip Atkinson specialises in strategic cultural and behavioural change. For the last 25 years, as a consultant supporting organisations in strategic development, leadership, organisational design, post-acquisition integration, Lean six-sigma, quality management and culture change. He has partnered with a variety of blue-chip companies in industries ranging from pharmaceutical to genetics, the automotive industry to finance and banking and from NHS bodies to Local Authorities and the Third Sector. He regularly presents at conferences and workshop sessions and has written seven books on change management. His articles, books and blog can be accessed at www.philipatkinson.com, and www.NFP-Excellence.org Philip is of Director Learning Strategies and Philip Atkinson & Co. Ltd Tel: 0131 346 1276 M: 07779 799286 and philip@philipatkinson.com.

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Dr George Downie and Dr David Parker describe blockchain and how it works, analysing its potential, and attempting to de-mystify some of the reported facts, as well as dispelling some of the misconceptions. In part II, the authors continue to describe how companies are using blockchain and offer some real life examples in the business world.

With some recent scandals in the charity sector, blockchain offers some options too. For those making charitable donations, blockchain provides the ability to precisely track where your donations are going, when they arrived, and whose hands they ended up in. From there, blockchain can deliver the accountability and transparency to address the perennial complaints around charitable donations; including the organisational inefficiency, or even financial misconduct, that can prevent money from reaching those it was meant for.

Bitcoin-based charities like the BitGive Foundation use blockchain’s secure and transparent distributed ledger to give donors greater visibility into fund receipt and use.

The company has launched a beta version of GiveTrack, a blockchain-based multidimensional donation platform that provides the ability to transfer, track, and provide a permanent record of charitable financial transactions across the globe.

Human resources and general management
Managing the HR function of even a small enterprise is a highly complex endeavour, especially with the seemingly ever-changing litany of rules and regulations. Many believe blockchain has various solutions to offer.

For example, in recruiting or redeploying staff, conducting background checks and verifying employment histories can be time-consuming, highly labour-intensive tasks for HR professionals. If employment and criminal records were stored in a blockchain ledger, and thus free from the danger of falsification, HR professionals could streamline the vetting process and move hiring processes forward more quickly. Similar benefits would accrue to recruitment consultants / head-hunters, whose pool of talent would not only potentially be widened, but would be infinitely easier and more cost effective to streamline and focus.

Australian company Chronobank (www.chronobank.io) is one firm aimed at disrupting the HR/recruitment industry, with
a specific focus on improving short-term recruitment for on-demand jobs (in cleaning, warehousing, e-commerce, and so on). The start-up aims to use blockchain to make it easier for individuals to find work on the fly and be rewarded for their labour through a decentralised framework and payment via cryptocurrency, without the involvement of traditional financial institutions.

General management and C-Suite applications also abound using blockchain, especially with regard to governance. The benefits of using blockchain for smart contracts and verifiable transactions can also be applied toward making business accounting more transparent. Administrative systems can be included to ensure smart contracts are executed according to rules encoded on the blockchain. Boards can also use such a system for shareholder voting by proxy and collaborative proposal management.

**Car leasing**
The experience of leasing, buying, or selling a vehicle can be a fragmented process for stakeholders on all sides of a transaction; blockchain may be able to change that. In 2015, Visa partnered with transaction management start-up DocuSign using blockchain technology in the form of a ‘smart contract’ to streamline car leasing. Smart Contracts are small computer programs that ‘live’ in the blockchain and are automatically executed once a predetermined set of tasks or protocols have been verified by the blockchain.

They execute automatically and check conditions considered earlier like facilitation, verification or enforcement. In this way the whole process can be streamlined, time is not taken up in verification, eg phoning DVLC to check if a potential driver has any convictions, endorsements or outstanding warrants, as well as credit scores and so on.

**Mood music**
Some entertainment management companies and entrepreneurs are turning to blockchain to make content sharing fairer for creators, again using smart contracts, whereby the revenue on purchases of creative work can be automatically allocated and paid according to pre-determined licensing agreements.

Companies such as Muzika, a blockchain-based music streaming platform, partnered with Binance, a crypto-exchange network, to try and help independent artists make money from their listeners. Muzika states that it plans to give 90% of revenue to the artists.

Managing the HR function of even a small enterprise is a highly complex endeavour, especially with the seemingly ever-changing litany or rules and regulations.
Before pivoting into an entertainment think tank, Mycelia was launched with a focus on producing ‘intelligent songs’ supported by blockchain technology and cryptocurrencies. Ascribe.io, a product of BigchainDB, also works to provide a trackable, verifiable record of ownership between artists and their work.

British blockchain start-up JAAK also has plans to work with music rights holders and other entertainment-industry stakeholders. JAAK, which provides an operating system for content, is developing a platform that allows media owners to convert their repository of media, metadata, and rights into ‘smart content’ that can self-execute licensing transactions on the Ethereum (a rival cryptocurrency to Bitcoin) blockchain.

Safe as houses
Buying and selling property is often a painful enterprise; indeed a 2016 study by Vivo Property Buyers, confirms previous findings that people find the task of selling their home more stressful than other major life events like having a baby, starting a new job or getting a divorce. Issues including a lack of transparency during and after transactions, copious amounts of paperwork, possible fraud, and errors in public records, are bugbears many of us have experienced.

Blockchain offers a way to reduce the need for paper-based record keeping, enhance transparency and verification and speed up transactions. This helps stakeholders improve efficiency and reduce transaction costs on all sides of the transaction. Real estate blockchain applications can help record, track, and transfer land titles, property deeds, liens and more, and can help ensure that all documents are accurate and verifiable.

For example, Californian based Propy bills itself as ‘a global real estate marketplace with decentralised title registry’. The company allows buyers, sellers, brokers, and escrow/title agents/notaries to come together through the utilisation of a suite of smart contracts on blockchain to facilitate and speedily execute transactions. Documents are signed and securely stored online, while deeds and other contracts are recorded using blockchain technology as well as on paper.

Many small firms are, understandably, reluctant to invest in ‘bleeding edge’ technology. Delaware Tech start-up Ubitquity offers a Software-as-a-Service (SaaS) blockchain platform, similar in concept (at a basic level) to say, Microsoft 365.

Similar to Propy, it securely records, tracks, and transfers deeds on a blockchain platform. This helps financial institutions, title, and mortgage companies benefit from a reduced title search time, increased confidence, and transparency.

Construction is a highly regulated industry which employs a wide variety of services and tradespeople for often complex projects. Validating their identities, their quality of work, and their dependability can be difficult and time consuming. A blockchain-based ecosystem could help solve this challenge by making it simpler to verify identities and track progress across multiple teams.

Blockchain technology could also help ensure professionals such as architects, quantity surveyors, etc. are qualified, registered and fully compliant with industry requirements. Checks can be made on construction materials ensuring they are sourced from the right places and are of the appropriate quality, while smart contracts may make it simpler to automatically issue timely payments linked to project milestones.

Keep on trucking: logistics on the move
As previously discussed, one of the most universally attractive aspects of blockchain is that it enables more secure, transparent monitoring of transactions. Supply chain management and logistics are therefore prime candidates for adoption and development.

Applying blockchain, as products change hands across a supply chain from manufacture to sale, the transactions can be documented in a permanent decentralised record, reducing time delays, added costs, and human errors.

Several blockchain start-ups are innovating into this sector: a number of firms are building traceability systems for materials and products, enabling businesses to engage consumers at the point of sale with information gathered collaboratively from suppliers all along the supply chain, thus substantiating product claims with trustworthy, real-time data.

The assets that can be tracked and recorded using blockchain aren’t just digital transactions they also include physical items, like trucks themselves, as well as produce. Many of the other industries discussed involve public records and private blockchain networks offer their own possibilities.

The Blockchain in Transit Alliance (BiTA) has already been formed to develop industry standards and educate its network of members. It’s the largest commercial blockchain alliance in existence, and its members are developing the frameworks that will change the trucking and transport industries.

Blockchain can improve transactions, shipment tracking, and fleet management, as well as protect assets and increase fleet efficiency. It can help track contamination in food, for example, by tracking a truck that carries ingredients and noting if safe storage conditions were maintained during any delays. Additionally, it can help optimise routes by matching truckers and items to be delivered with trucks in a given region or territory.

For a decentralised ledger to work in this industry, there needs to be buy-in from every side: small and large businesses, last-mile shippers, and mega trucking companies. Without total buy in, the system will not optimise fully.

On a slightly more controversial note, The cannabis growing and distribution industries have been investigating blockchain. Since the legalisation of marijuana in Canada, and growing support for legalisation across the US, the cannabis industry is

The benefits of using blockchain for smart contracts and verifiable transactions can also be applied toward making business accounting more transparent.
Mary successfully applies to join IMS

The certificate of membership is created, digitally signed and a block is created to represent the transaction

Some entertainment management companies and entrepreneurs are turning to blockchain to make content sharing fairer for creators, again using smart contracts.

Some entertainment management companies and entrepreneurs are turning to blockchain to make content sharing fairer for creators, again using smart contracts.

availability and client interfacing has had a major impact on the industry.

Three areas where we find clients are particularly exploring opportunities in using blockchain are:

**Smart contracts**
Projects can be incredibly complex with multiple, often contemporaneously deliverable elements, and many stakeholders. This results in multiple contracts, some multi-faceted and multi-stage.

Stage payment and service level agreement (SLA) fulfilment can be difficult to track and manage, sometimes resulting in costly disputes and project delays.

Smart contracts, securely stored and monitored in the blockchain allow both facility owners and contractors to ensure payments are made when the contract terms are fulfilled.

Blockchain could help avoid payment disputes by managing delivery and escalation, requiring the parties involved to move through agreed protocols before payment is made.

**Operations, communications and proof of fulfilment**
Nowadays material, equipment and parts are rarely made or supplied by a single source; supply chains are complex as is their management. Failure to deliver at one stage will result in a backlash from the customer. Using blockchain provides a digitally permanent audit trail that shows the company and the customer the state of the deliverable at each value-added step.

**Equipment service and operating performance records**
Private blockchains are being deployed to monitor regular maintenance and service visits from contractors, providing traceability and accountability. A process of executing smart
block is broadcast across the network e.g. The Institute membership, reconciled and validated

The block is added to the “chain” creating a permanent, immutable record

contracts to release payment once work has been verified as completed can be developed to handle and record transactions and the work involved.

As an example, most HVAC equipment now comes with the option of on-board smart interfaces, sensors and controls, which can verify once regular maintenance and servicing work has been completed. Once the specific set of tasks has been completed, embedded smart contracts can be executed; automatically releasing payments and updating maintenance records.

Education, education, education
By nature, academic credentials must be universally recognised and verifiable. In the primary/secondary schooling, university and professional environments, verifying academic credentials remains largely a manual process.

Deploying blockchain solutions in education could streamline verification procedures, thereby reducing fraudulent claims of un-earned educational credits. Sony Global Education, for example, has developed a new educational platform in partnership with IBM that uses blockchain to secure and share student records.

The same issues face professional bodies, and are exacerbated by the need for members to undertake specified CPD. Blockchain could assist at all points; from joining a body as a student member, through qualification and membership to CPD and beyond.

Retail therapy?
Often, consumers’ sense of trust in the retail system is linked to their trust in the marketplace where their purchases are being made, e.g. trust is a key element of Amazon’s success with customers. Currently, Amazon is the United States’ biggest online retailer. The company accounts for about 4% of all retail and about 44% of all e-commerce spending in the US10 (the S&P term for the top 10 US firms by revenue).

Amazon was one of the original ‘dot com disruptors’, but some of the new pretenders to the throne believe Blockchain could decentralise that trust, attaching it more to the sellers on various marketplaces and platforms than to the sites themselves. Many are developing decentralised blockchain utilities to connect buyers and sellers, without a middleman and the associated charges. One example of this is OpenBazaar (https://openbazaar.org/) which operates as an open-source, peer-to-peer network, offering merchants no fees and no restrictions on what can be sold. Reference to our upcoming article, ‘eBay in China’ that will emphasise the strategic power of this particular approach. Customers purchase goods using any of 50 cryptocurrencies, and sellers are paid in Bitcoin, with all associated data distributed across the global network instead of stored in a central database.

Authentication and brand theft is a massive issue, and blockchain offers some solutions. Global luxury brand Moët Hennessy Louis Vuitton (LVMH) created a platform, AURA, with Microsoft and blockchain start-up ConsenSys to authenticate luxury goods through blockchain. The platform enables customers to trace their products from design to distribution. For the brand, AURA adds additional protection from counterfeit goods and fraud.

Walmart and Sam’s Club joined IBM’s Food Trust network, which uses a blockchain distributed ledger. The retailers have asked their suppliers, especially those of leafy green vegetables, to add their produce data to the ledger. The system...
One of the most universally attractive aspects of blockchain is that it enables more secure, transparent monitoring of transactions. Supply chain management and logistics are therefore prime candidates for adoption and development.

Blockchain start-up BanQu is working with AB InBev to facilitate payments to cassava farmers in Zambia. BanQu’s platform tracks the farmers’ products through the supply chain and then provides digital payments to farmers via their mobile phones, even if they don’t have bank accounts.

In the UK, similar systems are reportedly being trialled by three large retailers in the run up to Brexit. In a different but no less important development, the government of Rwanda is working with UK-based start-up Circulor, with the goal of tracing and removing sources of funding for conflict materials.

The public gets what the public wants

The management of public services is yet another area where blockchain can help lessen paper-based processes, minimise fraud, and increase efficiency, accountability between authorities and those they serve, as well as increase and validate value for money.

In the US, the Delaware Blockchain Initiative, launched in 2016, aims to create an appropriate legal infrastructure for distributed ledger shares, to increase efficiency and speed of incorporation services. Illinois, Vermont, and other states have announced similar initiatives. Startups are assisting in the effort as well: in Eastern Europe, the BitFury Group is currently working with the Georgian government to secure and track government records and contracts.

In police investigations, maintaining the integrity of the chain of evidence is paramount, so a distributed, hard-to-falsify record kept via blockchain could provide an added layer of security to the evidence-handling process. In addition, blockchain can be leveraged for flagging certain kinds of transaction patterns, giving police additional investigative resources when an individual or company engages in suspicious financial activity.

One company in the US is developing sealable, tamper-proof containers with ‘near-field communications chips’ that register container contents through a blockchain system, creating a secure audit chain for evidence management in law enforcement.
With the ever-increasing squeeze on public services, libraries are often cited as being in the firing line when it comes to funding. In December 2017, San José State University’s School of Information received a $100,000 grant from the Institute of Museum and Library Services to fund a year-long project exploring the potential of blockchain technology for information services.

The researchers report their findings on a dedicated blog, and SJSU faculty members are leading a national forum with technical experts in library science, blockchain technology, and urban planning. So far, the potential uses for blockchain in libraries include helping libraries expand their services by building an enhanced metadata archive, developing a protocol for supporting community-based collections and facilitating more effective management of digital rights. The American Library Association’s Centre for the Future of Libraries are currently with the ALA on a book project involving case studies of how blockchain is affecting libraries and what they project will be accomplished in the future.

Blockchain could help streamline the benefits system, which is often bogged down by bureaucracy. In the, the Department for Work and Pensions has been working with start-up GovCoin Systems in 2016 to conduct trials for developing a blockchain-based solution for welfare payments. GovCoin mimics what in the accountancy profession used to be called ‘jam-jar accounting’: dividing money into separate ‘jam jars’ for different expenses. It gives welfare recipients instant access to their benefits, although these are controversially paid in cryptocurrency via a mobile phone app. Recipients can create their own digital jam jars for rent, utilities, etc.

Waste management is another hot topic in public services management. Recycling is one of the best ways to reduce landfill waste, but it can be confusing and laborious. A blockchain-based solution could help optimise recycling systems that are already in place. A number of companies are seeking to partner with local government to incentivise recycling. ‘The Plastic Bank’ offers money or digital tokens in exchange for used plastic, and is working with IBM to expand its recycling solution globally. Recereum is an example of a more localised platform that allows communities to reward people who properly sort their recycling with coins.

**Conclusions**

This is by no means an exhaustive treatment of blockchain and its potential applications; such would need a larger tome. Indeed, we run academic and professional development courses on this very subject. Rather, we have tried to explore the basics of the technology: what it actually is and is not, what some of the jargon actually means and where is it being applied, with real life examples in business today.

We have purposely not gone into explanations on issues such as tokenisation, Initial Coin Offerings (ICO), fungibility, hard forks or lightning networks. After all, what have you done to us? These and many more are all areas that may be of interest if you do apply blockchain technology depending on your level of engagement: purely strategic or hands on application. Hopefully we have de-mystified some of the reported facts and dispelled some of the misconceptions.

It is certainly here to stay: or at least to be the springboard for the next evolutionary leap. As well as the examples given, two notable high-profile cases are worth acknowledging:

**Dubai: The Smart City.**

In 2016, the ‘Smart Dubai’ department introduced a Blockchain strategy. Using this platform, entrepreneurs and developers are able to connect with investors and companies interested in partnering. The objective is to use blockchain as the base system to encourage the development of specific industry types which will contribute to making Dubai ‘the happiest city in the world.’

**Blockchain for Humanitarian Aid**

In January 2017 the United Nations world food program instigated a programme of humanitarian aid in in rural areas of the Sindh region of Pakistan. By using blockchain technology, beneficiaries received money and food, with all transactions registered on a blockchain to ensure the security and transparency of the process.

**References**


Private blockchains are being deployed to monitor regular maintenance and service visits from contractors, providing traceability and accountability.

**About the Authors**

Dr George Downie is Commercial Director of Williams Grant International & Williams Grant Leadership & Executive Development.

Dr David Parker is a senior lecturer in service operations management at The University of Queensland Business School.
With the advent of life membership we are attracting new members. There are still people who are engaged in management services who are not members and we would like them to join the Institute.

We can use our ‘direct entry’ route to fast track this and information is available from IMS HQ.

We very much hope that our existing members will make potential members aware of this option.

**What Next?**
*Contact the IMS for an application form*

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