itSMF UK SUMMER 2016 serviceTALK

Customer experience at the Met Office

13°C **R**°



Organisational change and IT service

A service design roadmap

Asset management in life-critical applications

Two-speed transition

THE JOURNAL OF ITSMF UK





IT SERVICE MANAGEMENT Third edition

'The no-nonsense approach of this book appeals to me. Straight-shooting description, examples and advice from experienced guys'. Rob England, The IT Skeptic*

£21.99 ISBN 978-1-78017-318-4

bcs.org/books/itsmthird

*Review of previous edition

防衛防衛

IT SERVICE MANAGEMENT

Support for your ITSM Foundation exam Third edition

Ernest Brewster, Richard Griffiths, Aidan Lawes and John Sansbury



© BCS, The Chartered Institute for IT, is the business name of The British Computer Society (Registered charity no. 292786) 2016

Contents

Editorial and CEO message	04
Countdown to Conference ITSM16 conference highlights and full agenda	05
Annual awards and ITSMF UK news Last chance to make ITSM industry award nominations, milestone for the Professional Service Management Framework, new ITSMF UK webinar series, new by-laws and more.	08
Organisational change and IT service Peter Johnson takes a fresh approach to the challenge of change in the digital age.	11
Soft skills are the hard part Barclay Rae examines the growing interest in people skills.	14
Two-speed transition: release management SIG members Sue Cater and Matt Hoey compare traditional and 'new thinking' approaches to various aspects of service transition.	16
Best practice beyond the age of heroes Aaron Stafford tells the story of a business transformation based of service management best practice.	20
Intelligent asset management in life-critical applications Ian Harris explains how ITSM processes and practices can be equally at home in other industries.	23
The service design roadmap Suzanne Slatter and the Service Design SIG rise to the challenge of navigating a path through the design minefield.	26
The IT service desk and cybersecurity Roberto Casetta argues that the service desk is ideally positioned to pick up the early signs of cyberattacks.	32

Customer experience and SLM at the Met Office 34 Kris Tarry investigates some ground-breaking customer experience work at the Met Office 34



Customer experience at the Met Office



Chief Executive Barclay Rae

Editor Mark Lillycrop

> Designer Ireview /ww.preview-design.co.uk

All communications to:

Service Management Association Ltd (trading style ITSMF UK), Premier Gate, Easthampstead Road, Bracknell, Berkshire, RG12 1JS, UK. **Tel:** 0118 918 6500. **Email: membership**@itsmf.co.uk

TIL and PRINCE2 are the registered trademarks of AXELOS Limited. ITSMF is a registered word mark of the IT Service Management Forum (International) Ltd

Disclaimer

Articles published reflect the opinions of the authors and not necessarily those of the publisher or his employees. While every reasonable effort is made to ensure that the contents of articles, editorial and advertising are accurate no responsibility can be accepted by the publisher for errors, misrepresentations and any resulting effects.

© Service Management Association Ltd. 2016. All rights reserved.

Material within this publication may not be reproduced in whole or in part without the express written permission of the Service Management Association (ITSMF UK) Ltd.

For all editorial, advertising, reprint or subscription enquiries, please contact communications@itsmf.co.uk

Welcome to the summer issue of ServiceTalk!

Browsing through the selection of articles in this edition, I'm reminded very strongly that the F in ITSMF stands for Forum. One of the great things about a membership forum is the opportunity for members to work together on projects of mutual interest and share the benefits of their experience and different organisational perspectives.

Nowhere is this more evident than in the work of our Special Interest Groups (SIGs), the beating heart of industry thought leadership within ITSMF UK. There are three SIG-inspired articles in this issue: a Service Design Roadmap from the eponymous SIG led by Susanne Slatter; the first in a series of two-speed transition articles from the Service Transition SIG, focusing on release management: and customer experience at the Met Office, from the perspective of the SLM SIG. In future issues, we have content lined up from the Problem Management and SIAM special interest groups - it's great to see such a broad range of member-focused research emanating from our SIG working parties. Special thanks too to Board Member Richard Horton who coordinates the work of these groups.

Complementing our SIG articles, we have some excellent contributions on topics as diverse as 'Cybersecurity and the service desk' (Roberto Casetta, HEAT Software), 'Best practice beyond the age of heroes (Aaron Stafford, Applicable), and 'Intelligent asset management in life-critical applications' (Ian Harris, Cyient), as well as a thoughtprovoking analysis of 'Organisational change management' from Peter Johnson of Cxi. The message that underlies all of these articles is that our people are our greatest asset, and that - as service management spreads its wings into other areas of the enterprise and technical capabilities make way for leadership and negotiation skills - it's the adaptability, resourcefulness and imagination of ITSM professionals that will mean the difference between success and failure in so many organisations.

With this in mind, please take a look at the details for this year's ITSM Award nominations – they're the best way to recognise and reward your people – read Barclay Rae's article on soft skills in this issue, and check out our growing PSMF resources on the website. ITSMF UK is about people –

recognising their strengths and providing the opportunity to share their expertise with other members. Please make the most of it!



Mark Lillycrop Communications & Professional Services Manager mark.lillycrop@itsmf.co.uk

Redefining our role in the industry

I hope you enjoy this latest edition of ServiceTalk. This is a time of great change and activity at ITSMF UK, where we are all heavily involved in a number of new projects and initiatives. We are now well into the process of redefining the role and positioning of ITSMF UK. This has included new services, new events, new workshops and masterclasses, and new videos and media.

Our flagship PSMF framework is receiving great feedback and practical interest from many organisations and other ITSMF chapters. We have several major organisations now engaged, and more to follow, using the PSMF as a career and recognition model for their people. It continues to evolve and we are currently working on developing a suitable platform for member-wide recognition.

One of our current priorities is to make use of a broader range of media in communicating with members and partners - look out for our sponsored video broadcast series, where we present high quality discussions on key topics. We also have some great new events coming up, such as our special seminar 'ITIL Practitioner in a DevOps world', while our SIGs and regional groups continue to meet and to produce new ideas and valuable industry input, some of which appears in this issue.

All this requires hard work and commitment from our core team, supported by our Board. I'm delighted to welcome our new member of staff, Steven Curtis, who has joined our team as marketing executive. We've also had some great additional support recently from John Sowerby, Rebecca Beach and Ken Wilson many thanks to them all.

The jewel in the crown for the year will be our Annual Conference - our 25th anniversary event. We have a very strong line-up of speakers on a wide range of topics, both traditional and leading edge. Check out the agenda in this issue. This will be an excellent event and a unique opportunity for networking and discussion - we look forward to seeing you there.

Most of all we value your support as members and fellow industry professionals. Our job is to recognise and share the full spectrum of the industry, and to encourage your involvement in a way that allows you to build your skills and capabilities. I hope we can be of service to you in some way very soon.



Barclay Rae CEO, ITSMF UK barclay.rae@itsmf.co.uk

ITSMF UK's **annual** conference and exhibition



ITSM16, our Annual Conference and Exhibition, is celebrating its 25th anniversary by returning to the Sofitel London Heathrow on 21st and 22nd November. Now is the time to book your place.

There are many reasons to attend Conference this year, including:

- Four dedicated tracks of educational presentations, interactive sessions and case studies, focusing this year on ITSM
 Fundamentals (classic ITSM topics and case studies based around well-known themes and processes); Leading Edge ITSM (DevOps, SIAM, IT4IT, CX, Cloud and hybrid commercial models); People make ITSM (communications, leadership, people development, change management); and Enterprise Service Management, taking ITSM skills beyond the IT environment.
- Excellent keynote presenters, opening with Dr Sue Black OBE, award-winning computer scientist, radical thinker and passionate social entrepreneur; and closing with Dave Coplin, Chief Envisioning Office at Microsoft, who will

be presenting on the visionary theme, The Rise of the Humans - Digital Transformation and what this means for IT Service Management. You can't afford to miss these unique thoughtprovoking sessions.

- An additional interactive stream, new this year, offering the opportunity to take part in interactive gamification exercises with G2G3 and GamingWorks.
- The opportunity to catch up with all the leading ITSM vendors in our exhibition and network with industry leaders in the breaks
- The chance to join in with this year's 25th anniversary celebrations!

Check out the full agenda overleaf, download the ITSM16 app (coming shortly) and start planning your Conference experience!





Alan Dedicoat Awards Host



Dr Sue Black OBE Keynote Speaker



Agenda

MONDAY 21 st NOVEMBER								
09:30 - 09:45	09:30 - 09:45 Conference Opening – Rosemary Gurney, Chair ITSMF UK							
09:45 - 10:00	PSMF Update – Barclay Rae, CEO, ITSMF UK							
10.00 - 10.45		Conferer	nce Keynote	– Dr. Sue B	lack OBE			
10:45 - 11:30	Refreshments, Exhibition and Networking (Exhibition Hall)							
Track	Track 1	Track 2	Tra	ck 3	Track 4		Track 5	
Торіс	ITSM Fundamentals	Leading Edge ITSM	People M	ake ITSM	Enterprise Servi Management		Interactive	
11:30 - 12:15	Autonomy with Compliance Julia Harrison	Harnessing SIAM and DevOps to enable Digital Transformation Graham Hall, DMW Group	for the fut foundatio Barry C	possibilities ure on the n of today Corless, nowledge	TITLE TBC Adrian Chiffi, TBC		11.30 – 13.30	
12:15 - 13:00	Brilliant Service Translation - ten things you need to know Service Transition SIG	Lego Serious Play applied to ITSM Christian Tijsmans, Connect The Dotz	Andrew	s organic Vermes, Tregoe	Enterprise Servi Management: Its to Share ITSM Be Practices Outside Stephen Mann Quick Content	Time est of IT	G2G3 DevOps Simulation Taster	
13:00 - 14:15		Lunch - Exhib	ition and No	etworking (E	xhibition Hall)			
Track	Track 1	Track 2	Tra	ck 3	Track 4		Track 5	
Торіс	ITSM Fundamentals	Leading Edge ITSM	People M	ake ITSM	Enterprise Servi Management		Interactive	
14:15 - 15:00	ITIL in action at Skipton Building Society Chris Brown, Computer Performance & Colin McMahon, Skipton Building Society	GOLD SPONSOR SESSION Making IT4IT real whilst leveraging your existing Service Management investments Tony Price, HPE Software Services	that need Stuart Optimal	is the land ds a hero Rance, I Service Jement	Enterprise Service Management - how to integrate non-IT-asset to ITSM Juergen Dierlamm, itSMF German Chapte		14.15 – 16.15 GamingWorks	
15:00 - 15:45	Building service in an agile way Matt Hoey, Grant Thornton UK	Value Adding Problem Management Rajesh Ambadath, TCS	for k Leon . King's Colle	a Service Fit Kings Judge, ege London ersity	GOLD SPONSO SESSION Freshdesk	R		
15:45 - 16:15		Refreshments, Ex	khibition and	d Networkin	g (Exhibition Hall)			
Track	Track 1	Track 2	2		Track 3		Track 4	
Торіс	ITSM Fundamentals	s Leading Edge ITSM		Peopl	People Make ITSM Ent		orise Service Management	
16:15 - 17:00	Professionalism of servi management in BT Melanie Kirby, BT	The SIAM SIG - Pra to get your SIAM pu the grour Steve Morgan & Riv SIAM SI	rogramme off nd chard Oliver,	GOLD SPONSOR SESSION Teamquest		Age of the Customer, a new beginning or the end of #itsm? Robert Stroud & Elinor Klavems, Forrester		
17:00 - 17:45 17:45 - 18:30	Our CSI Journey at LV=, having a passion for service LifeCycle Assurance: the pace of techn Kirsty Griffiths, LV Roxanne & Pager GCHQ		ce: Surviving chnology Paul,			worl throug Steve	Unmasking super users in your workforce – Driving efficiency through Next Generation Service Desk solutions Steve Rayner, Computacenter & Simon Gerhardt, Hays	
17:45 - 18:30 Informal Drinks Reception in the Exhibition Hall 19:15 - 20:00 Pre-dinner Drinks in Arora Foyer								
20:00								

ITSMF UK's annual conference and exhibition

itSMF UK

		TUESDAY 22 ND NO	VEMBER	
08:45 - 09:15		Refreshments, Exhibition an	d Networking (Exhibition Hall)	
09:15 - 09:45	Platinum Sponsor Keynote, TBC (Arora Theatre)			
Track	Track 1	Track 2	Track 3	Track 4
Торіс	ITSM Fundamentals	Leading Edge ITSM	People Make ITSM	Enterprise Service Management
09:45 - 10:30	How to make Change Management work in the real world! Peter Hubbard, Pink Elephant	It's time to rethink your ITSM Patrick Bolger, Hornbill Service Management	Intelligent Disobedience - A service dog concept relevant to service management Ivor Macfarlane, MacfPartners	Assessments for Action James Finister, TCS
10:30 - 11:15	Configure Yourself: Twists and Turns in O2's SACM Journey	The right type of ITstarts with the right type of CIO	Leadership Skills For ITSM: (The Agile Doorman)	Leveraging the power of service management beyond IT & into the enterprise
	Phil Downs, Telefonica UK	lan Cox, AXIN	Brian Crighton, Wood Mackenzie	Brian Hendry, Axios Systems
11:15 - 11:45		Refreshments, Exhibition an	d Networking (Exhibition Hall)	
Track	Track 1	Track 2	Track 3	Track 4
Торіс	ITSM Fundamentals	Leading Edge ITSM	People Make ITSM	Enterprise Service Management
	Fighting Fires - The Discipline of Major Incident Management	Adapting ITIL change and release management for Agile	Building a successful Service Management Team	Improving CX: A Case Study
11:45 - 12:30	Richard Josey, Unisys	and DevOps Kevin Holland, Independent Consultant	Neil Forshaw, Fujitsu	Alison Cartlidge, Sopra Steria
12:30 - 13:15	Season to tastecooking with Problem Management	Kill DevOps Mark Smalley,	Hindsight, Insight, Foresight David Wright,	Scrum in IT: How to combine sprints with support
	Problem Management SIG	ASL BiSL Foundation	Service Desk Institute	Michael Hall, Skyscanner
13:15 - 14:15		Lunch - Exhibition and N	etworking (Exhibition Hall)	
14:15 - 15:00	What's Business Risk got to do with IT?	Keeping the Balance	What can we DO about the digital skills shortage?	Customer Service Excellence: Now More Than Ever
	Karen Brusch, Nationwide	Met Office	Matthew Burrows, BSMimpact	Roy Atkinson, HDI/UBM Americas
15.00 – 15.45 Interactive Plenary – The Emperor's New Clothes, hosted by John Windebank, Oracle Panellists - Jane Sleight, Sopra Steria / Don Page, Marval / Barry Corless, Global Knowledge / Peter Johnson, Fair Day				
15.45 – 16.15 Keynote - The Rise of the Humans - Digital Transformation and what this means for IT Service Management, Dave Coplin, Chief Envisioning Office, Microsoft				
16.15 – 16.30		Closing Remarks – Barc	lay Rae, CEO ITSMF UK	
St. C. Suid and				
	Gold Sponsor	Gold Sponsor	Gold Spor	nsor
	Hewlett Packard Enterprise TEAMQUEST @freshdesk			desk
Sofitel London Heathrow 21 st - 22 nd November 2016				
www. itsmf .co.uk				



ITSM Industry Awards 2016 celebrating excellence

The ITSM Industry Awards offer a great opportunity to highlight the achievements of those around you – IT service management individuals and teams – whose skills, commitment and imagination have marked them out for special recognition. Why not put your organisation, colleagues or partners forward for an award this year, and join us at this year's Awards Dinner on 21st November to hear the results announced?

Service Transformation Project of the Year For the organisation that, in the judges' view, has completed the most successful service transformation during the year. The winner will be the organisation that can best demonstrate its ability to design, plan, and implement a service transformation, with demonstrable benefits to the business.

Service Innovation of the Year

JK

For the organisation offering the most novel product or service offering that has been developed over the past year. Finalists will be assessed on the level of ingenuity and inventiveness in their offering and the originality of the solution.

IT Service Management Team of the Year

For the members of a team that, in the judges' view, have supported their customers in providing inspirational service delivery and significant business benefit. They will have successfully built upon these relationships to become the beacon of Service Management within their organisation. Inspirational ITSM Leader of the Year For a senior manager or director who has not only demonstrated an exemplary level and breadth of skill, experience and accomplishment in ITSM, but has also shown that they are an exceptional and inspirational leader of people.

Young ITSM Professional of the Year

For an individual under the age of 30 who has demonstrated an outstanding level of achievement, ability, team support, rapid progress or business impact in the early years of their ITSM career, and who also promises great potential for future success.

Thought Leadership Award

For the author of the white paper, article or case study published by ITSMF UK during the year that provides the most informative, educational and thought-provoking ITSM content.

Training Provider of the Year For the training organisation most admired

by the judges for their outstanding

customer service, range of training resources, outstanding results and/ or innovative approach to training development and delivery.

Ashley Hanna Contributor of the Year

For the individual who, in the judges' view, has made the most outstanding contribution to the ITSMF UK organisation as a volunteer in the last year.

Paul Rappaport Award for Outstanding Contribution to ITSM

For an individual who has made a sustained and outstanding contribution over a number of years to the field of IT service management. The winner is chosen by the ITSMF UK directors.

Social media award

Look out for further details, coming shortly.

The nomination deadline for most awards has been extended to 20th August. Check out the website for further details.

SPECIAL OFFER

Sign up for a Two-day Conference Pass with Awards Dinner before the end of August and the dinner will be complimentary. Don't miss this great opportunity to attend the ITSM social event of the year for free! Just type in promo code FGDA when you get to the checkout.

Key milestone for PSMF framework

Our new Professional Service Management Framework (PSMF) initiative is attracting considerable interest from a growing range of member organisations.

In June we reached a key milestone with the announcement of CGI as the first adopter of the framework. David Fitzpatrick, Senior Vice President of Global Infrastructure Services at CGI in the UK said, "I'm delighted CGI has been recognised as the first organisation to meet the ITSMF Professional Service Management Framework standard. We are committed to developing fulfilling careers for our members and this endorsement is a great way to demonstrate this." (See the full announcement on the website).

Several other organisations are currently going through the process, and we're now working on the second stage of PSMF, which will involve the roll out of our member scorecards and credit system.

For more information on PSMF – including capability models, learning & development guides and other content – go to www.itsmf.co.uk/psmf.

PROFESSIONAL SERVICE MANAGEMENT FRAMEWORK



New ITSMF UK by-laws published

New by-laws for ITSMF UK, supporting the Articles of Association published last summer, have now been released and are available to view at www.itsmf.co.uk/governance. Produced by Board Member Richard Horton, supported by John Windebank, David Backham, and Karen Brusch, the bi-laws cover the principles by which the Articles are interpreted and give specific guidance on how ITSMF UK is organised to fulfil its objects within the terms of the Articles.

The first review cycle for by-laws and Articles starts now. If you have any feedback you wish to be considered, please contact sarah.nieto@itsmf.co.uk

New webinar series from ITSMF UK

If Enterprise Mobility Management is on your agenda, you need to catch up with our recent video discussion on the topic. The video, sponsored by Matrix42, is the first in a new series of ITSMF UK webinars featuring discussions facilitated by our CEO Barclay Rae. Barclay is joined by Matrix42 CTO Oliver Bendig and Duncan Watkins, Independent ITSM Analyst at Realising Value, and the discussion covers the many benefits and challenges of successful EMM, including cost, asset management, licensing, data protection, customer support and much more. View the video at www.itsmf.co.uk/matrix42 and look out for further webinars in the series, coming shortly.

Steve joins the team

We're very pleased to welcome a new addition to the office team. Steve Curtis joins us as marketing executive, bringing a new style to member communications and general marketing. Steve, a keen football fan and avid blogger, says he is looking forward to meeting as many members as he can and getting to know more about the world of service management.

He can be contacted at steven.curtis@itsmf.co.uk





Dramatically increase efficiency and reduce costs with Marval's service and customer-centric MSM ITSM software solution

- The fastest, most innovative 'multi-level' ITSM software you can buy
- Easy to deploy, use and maintain
- Code-free configuration and customisation
- Flexible, secure, trusted
- Delivered on time and on budget by ITSM experts you can trust



Delivering service excellence and innovation since 1989

Increases efficiency

TO SEE FOR YOURSELF CONTACT MARVAL TODAY

T: +44 (0) 1536 711999 E: info@marval-group.com W: marval-group.com Twitter: @marvalgroup Facebook: MarvalSoftware

Reduces costs Improves customer experience



Organisational change and IT service: enabling innovation from below

Digital, DevOps, agile, lean, IT4IT—it is not the first time that the IT industry has been surrounded by an enormous cloud of hype. Nevertheless, this might be a particularly dense genus of cumulus-hyperbolus which the sector finds itself at the centre of at the moment. It might not even be too farfetched to draw parallels with the nineteen nineties—web 1.0 and dotcom booms—when there were similar levels of noise; on that occasion about what the internet would do for, and change within, the industry.

One of the issues with these periodic hype storms is the difficulty that audiences have in sorting quality analysis from marketing push. Web 1.0 demonstrated this problem particularly well via the insane valuations and subsequent crashes of early dotcom enterprises. The world learned, although it should have realised this in advance, that those who are supposedly wise about the state of things are not always so. Indeed, Bill Gates' reported dismissal of the internet as a "fad" was a case in point.

Lacking, as we always will, a definite authority in the art of futurology, those making important decisions about corporate strategy and expenditure—or even an imminent career move—will probably be best served if they follow the sage advice of the ancient philosopher Plato (quoted on the right)—only substitute the phase "hype" where the philosopher writes "life".

At present, there is much guidance on offer to the would-be transformer of the corporate IT function. A sizeable portion of it is encompassed in the catch-all buzzword digital. Digital signposts customer and user experience, new business strategy, cloud, mobile, analytics and social. It relates to utterly transformative ways of operating the business and, in turn, IT. Hot on the heels of digital are what are claimed to be supporting (although technology-focused) "I feel myself, and I daresay that you have had the same feeling, how hard is the attainment of any certainty about questions such as these in the present life. And yet I should regard a man as a coward who did not test what is said about them to the uttermost, or whose heart failed him before he had examined them on every side. For he should persevere until he has achieved one of two things: either he should discover the truth about them for himself, or learn it from others: or, if this be impossible, I would have him take the best and most irrefragable of human theories, and let this be the raft upon which he sails through life..."

Plato—Phaedo (Plato & Jowett, 1930)

methodologies. These include DevOps, agile, lean, SIAM and even good old ITIL (according to its proponents, only when this is used in the right way). All are vigorously argued to be necessary weapons in the armoury of the digital transformer.

It cannot be denied that those charged with creating business applications can learn much from the aforementioned methods. It will certainly be useful to the business if applications are designed with User eXperience (UX) in mind, if they are moved to the cloud, and if the concept of perpetual beta is wholeheartedly embraced. Whilst all this is valuable, those working in the IT sub-sectors which are concerned with human-to-human interactions (the service desk, second line support, etc.), might be forgiven for being disappointed with the lack of specific advice related to their particular specialisms in this storm of digital prescription.

Florence from above—Peter Johnson

Nonetheless, user-facing technologists and managers will take what they can from the digital thought leadership on offer. Thus you will find IT support teams developing and acquiring UX-friendly service tools (cloudbased, self-service heavy), utilising SIAM approaches to manage external suppliers, and ensuring that there is greater integration between operations (that is the support teams) and development.

There is nothing in the list above which is not to like. However, digital, agile and DevOps have less to say about transforming support and operations functions beyond the new methods of organising to promote customer-centric development. Therefore, while digital transformers are busy aiming for rapid development, and deciding upon infrastructure and application designs to enable positive UX, they are also, in my view, revealing a deficiency in two key areas. The first is the dearth of knowledge related to excellence in human-to-human service, and the second is an absence of a focus on the innovative capacity of the entire enterprise. The latter is keenly required in the age of disruption and is also closely related to the former, as will be elaborated upon below.

In respect of customer satisfaction, it is worth restating the fact that digital technology is not the complete answer. This is acutely recognisable where human-to-human interactions are concerned. For instance, while a self-service digital hospital might be the goal of the singularity dreamers, for the rest of us such an idea would be unpalatable. Indeed, socio-technical systems theory (see Cherns, 1976; Clegg, 2000) has much to contribute on this point. According to the principles laid out in this theory of design, both technical and human aspects need to be considered in any project. By way of an example, consider the fact that the technology for making video calls has existed for decades. However, it is used only rarely when compared to audio calls. This is because humans enjoy something about the visual anonymity offered by audio: human needs must be considered.

Of course, there is much about the digital paradigm which does satisfy customer demands for speed, simplicity and efficiency, and this is why organisations such as Amazon and eBay have fared so well. Nevertheless, there are also many occasions where human needs are best served by a conversation, an interaction or in-person collaboration. It is perhaps the reason why digital professionals enjoy attending conferences, hackathons and like. One could facetiously ask—"why isn't there an app for that?"

It is a subtle point, but one which signposts the reasons why human-to-human technology service in corporations need not be consigned to the dustbin of the post-digital landscape (an idea that some have hinted at). It might even be argued that to do so would be one of those hasty fad-driven mistakes that both users and corporations may come to regret in later epochs. This line of reasoning leads to the conclusion that human-to-human IT service functions remain necessary within enterprises, and the goal should be—like hackathons and conferences—to bring groups of people with differing specialities together when the need arises.

In order to develop this point further, it is necessary, in mind, to divide the enterprise into two distinct groups of employees. The first group are the non-IT staff. These will include finance people, the sales department and other teams relevant to the industry in question. For instance, in the insurance sector one would find underwriters and actuaries here, while in a creative firm, there would be designers and producers. The second grouping of employees are the technologists in the organisation—IT service staff, developers, technical project managers et al.

The above might be regarded as a rather arbitrary division: on one side technologists, on the other, the remaining staff. However, the subject matter at hand is technology service in enterprises, therefore this particular split is appropriate. Moreover, that technological datum line is the point at which human-to-human IT service occurs. It is probably unnecessary to state that the finance people, actuaries and designers are likely to have good knowledge of IT; increasingly these departments will be staffed by those referred to as digital natives. Nevertheless, on their side of the split, the primary sphere of expertise will always be the main roles of the employees-e.g: finance, actuarial and design. Technical solutions, advanced coding and infrastructure knowhow should remain the expert speciality of the technologists. The process of the former seeking help from the latter is what we otherwise describe as IT service.

Trichromy is an approach to service provision which is being explored in relation to the IT service industry (see Johnson, 2014). It aims to provide guiding principles to those concerned with human-to-human service interactions. Unlike the other popular initiatives which have been mentioned above, it is not a methodology. Moreover, while it is being applied to IT service at present, it is in fact a theoretical framework built on the complex adaptive systems literature (see Stacey, Griffin & Shaw, 2000), the self-determination theory of motivation (see Gagné & Deci, 2005) and the Schwartz model of human values (Schwartz, 1996). It is therefore a genuinely industry-agnostic theory of work psychology.

A key construct in trichromy arises from the Stacey et. al. (2000) reading of complex adaptive systems. This is the idea of autonomy, or human freedom. Autonomy is a constant theme in trichromy, and is posited as an important driver of responsiveness and innovation on both sides of the IT service divide. Autonomy relates to organisational practices which result in the reduction of hierarchy and top-down control, the elimination of unnecessary processes (that is, the majority of them), freeing staff from rigid ideas of best practice, and also reducing the influence of pre-set targets on worker behaviour. In place of the old control structures, trichromy advocates using the power of individual human values. These, according to trichromy, channel autonomy towards directions which are beneficial to the enterprise

The call for greater autonomy for employees is nothing new. In response to the rising popularity of scientific management (see Taylor, 1911) in the early and mid-twentieth century, theoreticians such as Frederick Herzberg (Herzberg, et. al., 1959), described the benefits of autonomy to workers and organisations. Modern initiatives including agile and DevOps echo these earlier efforts. However, unlike in the new technological methodologies, autonomy is not an optional component of trichromy—it is central to it; trichromy cannot exist without autonomy. Furthermore, trichromy differs from many contemporary prescriptions about autonomy because it is a holistic philosophy which integrates its three constructs (control, values and autonomy). Together, the whole is certainly more useful to the enterprise than the individual parts (including autonomy).

The central place that autonomy and complex adaptive systems occupy in trichromy enables the concept of innovation from below to come to life. Trichromy posits that autonomy is essential for employees in a service department because such freedom allows staff to be more responsive and innovative. Thus when a user contacts the service agent, the individual service giver is able to think beyond pre-baked processes, targets and offerings, and deliver outcomes which are truly relevant and pleasing. Autonomy therefore ensures that the intelligence, creativity and service passion of everyone in the service function is utilised, rather than of just a small number of managers who in the past were responsible for the design of the processes and targets.

The trichromatic notion of the organisation as a complex adaptive system goes beyond a simple prescription to grant greater autonomy to service agents alone. Trichromy also imbues the service users with autonomy and freedom. This implies an acceptance (by the service organisation) that the ideas and innovations of all users are important in their own right. It is not an insignificant point. It is a direct contradiction of the distinction that ITIL makes between customers (managers and service negotiators) versus users (ordinary employees). According to ITIL, customers are able to influence service levels, service catalogues and service design, whereas users simply must accept that which is already agreed. In the trichromatic view this distinction is anathema-both users and service agents are to be released from the restrictions of excess hierarchical control.

Traditionally, the number of individuals responsible for designing and negotiating digital services was restricted to the few managers and senior people (on both sides of the datum) whose role this was. Viewed through the lens of the new philosophy, innovation can now emerge from anywhere: from junior level designers, actuarial experts and finance staff as well as from the managers. Perhaps most importantly for the intended audience of this piece, trichromy encourages business employees to freely collaborate with the (now) autonomous technologists-that is, the people who have the expertise to turn the innovative digital dreams of the business users into reality.

The outcomes described above have been referred to elsewhere as innovation from

below. This phrase recently appeared in an article in CIO magazine (Qualtrough, 2016) in which the chief technology officer of the Royal Opera House in London opined:

"'One thing I'm thinking quite a lot about is how we create the right opportunities for innovation in the rest of the organisation,' he says. 'That can sometimes be labelled Shadow IT, although in my view that's probably an unhelpful label since we can all be creative technologists.'

'The role of a centralised service is yes, to think about things and how they move to the core of the business, how they become operationalised, how they can be made more efficient, and how they can be secured.'

'But actually the real innovation is going to come from the lighting designers, the sound and video designers, people trying to solve problems—it's about enabling those people around the organisation. Putting the right tools in their hands and giving them the right advice to be pioneers in the right field with technology.'"

Whether or not the CTO in question, Joe McFadden, had been exposed to trichromatic ideas is unclear. However, his vision is identical to that of the advocates of this approach. Mr McFadden appears to have recognised that in order for a business to reach its innovative potential, it needs to release the intelligence of all its staff; or as it was put by Albert Cherns as far back as 1976, to allow problems to solved by those closest to the issue. Trichromy then, offers an approach via which those concerned with the organisational elements of digital transformation can move beyond the mere platitudes of thought leaders. It describes a philosophy, principles and the necessary action which may turn facile prescription into valuable reality.

The discussion above is an attempt to unpick some of the complex organisational elements necessary to realise the noble aspirations of the digital revolution. It is increasingly being recognised that in addition to new applications, new infrastructure and development methodologies, organisational change of this nature is also required. In fairness to the technological guidance currently on offer, many do acknowledge the importance of what they refer to as 'culture change'. However, it is difficult to ignore the fact that the primary aim of these methodologies is effective application development, whereas the singular goal of trichromy is the changing of the organisational mindset. In many ways trichromy could be argued to be a supporting layer beneath any of these methodologies.

Most importantly perhaps, trichromy offers a philosophy which human-to-service providers can follow. It suggests the reason for their continued existence in the post-digital world and indeed, also hints at their value—their central place in the process of ongoing digital innovation—to the enterprise. Trichromy turns IT service departments into the very purveyors of innovation from below.

The ideas of Eamonn Healy will serve as a coda to this piece. Evolutionary biology is the speciality of Professor Healy, and amongst laypersons, he probably best known for his appearance in the 2001 film Waking Life (2001). In this motion picture, Healy is featured delivering a monologue about the telescoping nature of evolutionary time. He enumerates the periods between major biological landmarks: two billion years for life to develop on earth, six million years for the hominid to appear and one hundred thousand years for mankind. Healy then proceeds to describe milestones in human progress: ten thousand years for agriculture, four hundred years to the scientific revolution and one hundred and fifty years to the revolution of the industrial variety.

It is in this almost logarithmic curve that Healy detects telescoping. His monologue ends with predictions about this trend continuing though our lifetimes and beyond, and the fantastic implications of this. The professor might yet have a point, for we indeed may be witnessing increasingly rapid change at present. Only recently, technological progress occurred on a scale that was measured in decades-consider the mainframe to the personal computer to the World Wide Web. However, the timeframes of today are evershrinking: web to mobile to cloud to Internet of Things. Major technological shifts occur every few years-and that scale is continuing to reduce.

Digital (service) is the thing right now. It is the very epicentre of the hype storm. However, should the Healy thesis be correct, soon enough we'll be moving on to the next thing. If—or indeed, when—this occurs, the main weapon in the organisational armoury to deal with change will continue to be innovation. This is why trichromy—fad agnostic and based on individual human psychology—may be a more profitable long-term strategy than some of the reactive ideas for organisational change which are rooted in thinking designed to solve the immediate problems of today.

However, the difficulties of understanding and utilising approaches such as trichromy are not insignificant. They are so different to current ways of doing things that the situation might be likened to a Kuhnian paradigm shift (Kuhn, 1960). One of the features of a paradigm shift is that adherents of the new gestalt find it difficult to communicate with those who subscribe to the old way; the latter interpret the tenets of the new thinking through the prism of the old, rendering it impotent and unintelligible. Nevertheless, the eternal hope of innovators is always that over time there will be a groundswell of converts who will begin to adopt the once-revolutionary mindset. It is at that point that the industry will acknowledge the new IT service, and the customer experience will soar.

It is a dream, but perhaps one which might

secure the future of human-to-human IT service at a time when it is under intense scrutiny from those digital transformers with a penchant for the impersonal. It remains to be seen whether the sector will undertake the heavy lifting necessary to deeply transform the organisational elements of the IT department (and consequently the rest of the enterprise). The alternative is a continuation of the dominance of technology-focused methodologies and empty organisational aphorisms. Nevertheless, at the most macro level, the Platonic advice above remains valid. Consider all the arguments, then decide.

For more information about trichromy visit cxiservice.co.uk

References

Cherns, A. (1976). The principles of sociotechnical design. Human Relations, 29, 783–792 Clegg, C. W. (2000). Socio-technical principles for

system design. Applied Ergonomics, 31, 463–477 Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. Journal of

Organizational Behavior, 26, 331–362 Herzberg, F., Mausner, B., & Snyderman, B. B. (1959).

The Motivation To Work. New York: Wiley

Johnson, P. A. (2014). Making Light Work: Rethinking the service organisation. Sheffield: Fairday Books

Kuhn, T. S. (1957). The Structure of Scientific Revolutions. New York: Random House

Plato & Jowett, B. (1930). The Phaedo of Plato. Waltham Saint Lawrence, Berkshire, Golden Cockerel Press

Qualtrough, E. (2016). Royal Opera House CTO Joe McFadden interview—Digital opening at Covent Garden, CIO, 18 April 2016, CIO [Online]. Available from: http://www.cio.co.uk/ciointerviews/royal-opera-house-cto-joe-mcfaddeninterview-3638634/ (Accessed: 25 April 2016).

Schwartz, S. H. (1996). Value priorities and behavior: Applying a theory of integrated value systems. In C. Seligman, J. M. Olson, & M. P. Zanna (Eds.),The psychology of values: The Ontario Symposium (Vol. 8, pp. 1–24). Hillsdale, NJ: Erlbaum.

Stacey, R. D., Griffin, D., & Shaw, P. (2000). Complexity and Management: Fad or Radical Challenge To Systems Thinking. London: Routledge Taylor, F. W. (1911). The Principles of Scientific Management. New York: Harper Brothers Waking Life (2001) Directed by Richard Linklater [Film]. USA: Twentieth Century Fox Film Corporation.



Peter Johnson is founder of Cxi Service, providing organisational transformation consulting in the IT service industry.

Soft skills are the hard part

LIFE

COMMUNICATION

KILLS



Change is afoot in the ITSM world and it demands a whole new skillset. Barclay Rae examines the growing interest in people skills.

LEARNING

HELP

WORK

SKILLS

 $\hat{\langle}$

PEOPLE

We are now seeing a real renaissance in the ITSM industry. The days of the single approach to service and project management, based purely on ITIL or Prince2 as the only tools and models to use, are numbered. There is a clear and tangible move to use a broader portfolio of methods and approaches, including CoBIT, DevOps, BRM, Lean, Cynefin, IT4IT, SIAM and other ideas, as well as ITIL of course. This development is healthy and underlines the need to use a variety of techniques in order to be flexible.

But as with every renaissance, we now need to find the renaissance men and women with the diverse skillset and knowledge to support our Brave New World, people who understand people. Indeed, the other big development in the last couple of years (and on-going) is the growing appreciation of 'people skills'. We're all familiar with the long-trumpeted 'people, process, technology' mantra which is used in our industry. However the focus has too often been on process and technology, at the expense of the people part.

It's long been known and understood by many people across the industry that 'soft skills' are the real differentiators, the skills and attributes that lead to success. If you simply compare two practitioners with the same levels of qualifications - technical and process - the one with the good people skills is more likely to succeed, to be the one that you would hire and want to work with. Similarly, you might prefer someone with fewer technical skills and qualifications to work on a project if they have the 'soft skills' needed - good personal communications, diplomacy, organisational change experience, negotiation, management, commercial skills etc.

Thankfully we are now calling this out and there is a real demand for knowledge, guidance and expertise in this area. The ITIL Practitioner included a number of these elements, our own (ITSMF UK) PSMF is based around these ideas, and many of

the plethora of new models include or are focussed on people and cultural elements, such as DevOps, BRM, and Cynefin.

At last!

So why has this been such an issue? Why have so many projects missed the point about people and human interaction skills? Why have we not taken this seriously at the industry level so that it's clear to all involved that process and technology are not enough?

One simple answer might be that it has often been beyond the capability and experience of those tasked with delivering these projects, and whose management assume that by sending them on a few training courses, they will then be able to transform the whole organisation. Given that the industry hasn't really pushed the value of people enough, this is perhaps understandable.

A wider interpretation of the problem could also be that soft skills are actually the hard part.

The demands of changing culture, and particularly standing up to long established dynasties and embedded ways of working, is often just too much of a challenge, particularly if you don't have the necessary soft and hard skills. To be honest, it's a real misnomer to call these skills 'soft' which implies easy, fluffy and lightweight. In actual fact these skills require mental toughness, initiative, bravery and confidence and are anything but 'soft'.

What we need to do as part of the reinvention and renaissance of people at the centre of ITSM is to clarify that their people skills are not just essential but that, whilst they may not be IT/technical skills, they are very much in demand as part of what IT does and the value it delivers.

So, what do practitioners need to do to develop these 'soft hard' skills?

- As mentioned above there is a growing set of standards, methods and models available, many of which embrace these competence areas explicitly. It's a good idea to be aware of these and to explore them, and to use relevant parts for your organisation.
- Using experience gained in other areas is also useful, and should be called out and referenced as widely as possible.
- Recruitment specialists should reference the key skills and attributes required - not just certificates but also real-life experience and evidence of competence in areas beyond technology.
- Our management of people should reflect the wider set of skills needed - so job descriptions, appraisals, reviews and rewards schemes should all include the 'soft hard' skills as key elements.
- Self-awareness is important: we should all be clear of our areas of strength and weakness, in order to improve. It is true that not everyone is a great communicator or leader - however being clear of where you can add value and where you need to improve your skills is an essential starting point.

So whilst we can build awareness of the types of skills needed, and we can't all be exceptional at 'soft hard' skills, it's useful for the organisation to set out the importance of these skills and how they complement the more traditional technical and processoriented capabilities. Recognition and awareness are the first steps: we can improve our organisation's performance and perception by emphasising the value of the tough side of work - soft skills!

Barclay Rae is CEO of ITSMF UK



Two-speed transition: release management

SPEED OF

0

SPEED OF OPERATIONS

In this and the next two issues of *ServiceTalk*, the ITSMF UK Service Transition Specialist Interest Group take on the challenge of applying 'bi-modal IT' or 'two-speed ITIL'. Agile, DevOps, the culture of doing more with less and doing it quicker, are all common expectations facing IT service providers in a world where the frameworks are geared more towards traditional approaches to service management. By pitting traditional against 'new thinking' approaches in several Service Transition areas (release management, the service catalogue and early life support), SIG members **Sue Cater** and **Matt Hoey** share their experience and argue the case for applying the different approaches. The series starts with release management.

Traditional release management (Sue Cater)

ITIL tells us that the purpose of release management is to plan, schedule and control the building, testing and deployment of releases, and to deliver new functionality required by the business while protecting the integrity of existing services.

It goes on to define a release as: "one or more changes to an IT service that are built, tested and deployed together. A single release may include changes to hardware, software, documentation, processes and other components."

Release management consists of eight steps, which are delivered over five stages.

Those eight steps are:

- Develop release management policy and strategy
- 2. Release-specific initiation and planning
- Design, develop, build and configure the release
- **4.** Hardware, software, licence acquisition
- 5. Execute release plan
- Release acceptance final operational readiness test
- 7. Deploy release
- 8. Post-implementation review/lessons learned

STAGE 1: PLAN

This stage completes the first two of our eight steps:

- Develop release management policy and strategy
- Release-specific initiation and planning:

Develop release management policy and strategy

If you are lucky enough to work for an organisation with a mature set of service management processes and/or a strong Service Design function, this should be quite straightforward for you. Otherwise this will involve much effort to determine how your organisation is best served by its release





management strategy and the policies which bring that to life.

If starting from scratch, consider how you will manage the relationship between change management and release management (change management is an essential precursor for release management). Key things to consider include:

- How often will you allow releases to be made?
- What are your critical business periods?
- How will you define an emergency release?

Release-specific initiation and planning

Having set out the framework within which your release must be planned, at the last step you now focus on the detail for this particular release – the who, what, when, where and how.

- Release planning meeting. Set up a session to include all key stakeholders to plan how the release will be done
- Review test plan. Check scope and coverage – are you testing the things that really matter?
- Develop communications plan. Define who needs to know what and when and how you will make that happen.
- Develop plan for this release.
- Bring together all the things you've identified in the preceding steps to form a plan for this release.

STAGE 2: BUILD

This stage completes the next three of our eight steps:

- Design, develop, build and configure the release
- Hardware, software, licence acquisition

Design, develop, build and configure the release

In this stage you design, develop, build and

configure the release candidates (that is, the items that will comprise your release).

Hardware, software, licence acquisition

This step involves gathering together the materials needed to create the release. Start by identifying the affected Configuration Items (CIs) then retrieve their baselines from your Service Knowledge Management System (SKMS), where they are pre-existing.

Execute release plan

The three things to do at this stage are:

- Release validation. Review test plan including business and use test cases; check that you are testing the important things.
- Build and configure release candidates
- Test the release candidates individually and together; validate the individual integrity of the release candidates as well as their sociability.

STAGE 3: ACCEPT

This stage completes your sixth step – release acceptance.

Release acceptance – final operational readiness test

At this step you are ensuring that the new service will work as designed by:

- completing your planned operational readiness and user acceptance testing
- reviewing your SLAs to understand any impact on agreed service levels – managing any issues through with SLM (however, if your SDP was robust this shouldn't arise).
- ensuring IT service continuity and business continuity plans have been updated/ completed
- reviewing the training plan; ensure that all support team readiness activities are either completed or on target to complete prior to termination of Early Life Support (ELS).
- ensuring all support team communications are on track and that build team understand the extent of their ELS commitment.

STAGE 4: DEPLOY RELEASE

The things you need to do at this seventh step are:

- confirm all change approvals have been received
- review and execute the communication plan
- deploy the release
- create a request to update the CMDB (SKMS)
- conduct a post-release validation is the outcome as expected?

- notify change management of the result
- invoke ELS and your transition to operations processes

STAGE 5: REVIEW

For this final step you conduct the Post-Implementation Review (PIR) and gather lessons learned. The things to focus on here are:

- completing the release record
- holding the PIR decide whether this will be a joint session with your client and other suppliers or separate sessions you consolidate later. Naturally, a joint session will be more useful provided your relationships are sufficiently mature for frank discussions.
- capturing lessons learned and ensure they are available to others. Unless you do that the work is pointless.
- making sure all completed documentation is collected and associated to the release as part of the release closure process.
- updating the release template as needed to facilitate future releases.

Over to Matt...

Agile release management (Matt Hoey)

In today's world of mobility, cloud and social media the demand and pressure from customers to deliver things quickly has grown enormously. Release management sits there as a best practice process to ensure we do things right but in its traditional form seems at odds with the fast moving, competitive agile world we increasingly find ourselves in.

Being agile, despite some perceptions, doesn't throw best practice and elements of it like documentation and planning out the window. My aim here is to show you that you can successfully apply an agile approach to your release process and still maintain quality. What qualifies me to argue this case? The approach outlined (see Figure 2 overleaf) is the one we use at Grant Thornton UK LLP. Our IT team have achieved ISO 20000 and ISO 27001 accreditation so we're proof you can operate a best practice service management system and still employ an agile approach.

Coming out of the starting blocks correctly

The most important lesson we have learned is that the key thing to get right when adopting an agile release management approach is the identification of the right Minimum Viable Product (MVP). An MVP is a really early version of a product or service. It will have a small number of features (it may even just be one feature) so that it is quick to build. But the key part of the definition of an MVP is that is it usable by the customer and delivers them some value. Having an MVP in place with a customer at the earliest possible opportunity allows them to:

- start using and getting value from the application or service very quickly.
- provide feedback on how to progress the development of the application or service in order to best meet their needs.

With it being limited in features if we do fail (i.e. we're building completely the wrong thing), we fail fast with minimum waste in terms of time, resource and cost. For a great example of how to and how not to build an MVP, next time you're on the web, take a look at http://blog.deming.org/2014/11/minimalviable-product/

Planning

The first phase of the process is a brief planning stage. There's a misconception that being agile means you have free reign and no scope. This is not true. It allows us to be flexible to be able to handle changing requirements and other changing factors like technologies and the environment (legislation for example), but we still need to define a scope. We also need to identify the team who will deliver this release and the overall approach we'll take.

Alpha

The primary goal of the alpha stage is to build the right MVP and get a limited number of customers using it. Some people may refer to it as a proof of concept and you may find you are testing out or experimenting with different approaches, technologies or third parties.

Doing this means we get to understand the release better and a limited selection of customers and stakeholders get to test it out and use it. Their feedback allows us to iterate the development and incrementally improve the release in a low-risk situation. It also provides that opportunity to fail fast. Consider the costs and risks of failing here in the alpha stage against those when it is fully in production; they are greatly reduced.

Understanding the release better at an earlier stage means we can start accurately planning

for its production. Support arrangements and responsibilities, architecture diagrams to show how it all fits together, and an idea of how we will test the release can be considered and work commenced at this early stage.

Beta

When we're confident the approach/product is right, we move into beta, expanding its use to a wider audience. Customers may be using the release for real but we're still in a low risk environment. We test the release, and continue to gain feedback and incrementally improve it until we're ready to go into production.

Again we're learning more about the release and we'll use this phase to, amongst other things:

- test deploying the release.
- understand the things we'll need to meet service levels in production (e.g. availability, security, capacity).
- identify and document procedures we'll need to operate the release.
- document recovery procedures.
- understand who and what is needed to provide support.
- confirm that it does what the customer wants it to do and address if not.

Having a working release in place earlier, albeit in a limited form, not only benefits the customer but also helps us as it makes all the above tasks so much easier. It allows us to make informed decisions about how we ensure quality when the release is in production, rather than guessing how it will behave or need to be operated.

Production

We're now ready to deploy to everyone who needs the release. We can feel confident as the release moves into ELS that we have minimised risk and have the right product or service in place, due to the path we've taken to get here (there's an article on two-speed ELS later in this series). The release may look very different to how it started out in alpha but that's because it has been continually shaped via feedback from those who matter most in release management: the people who use the service and want or need to get value from it.

Summing up

Agile release management doesn't mean the death of best practice, scope, planning or documentation. We need all those things and they are still delivered using this alternative approach, but also with the added benefits of:

- getting something usable to customers quickly, from which they can start getting value.
- minimising risk and allowing us to fail fast and massively reduce waste. It's much better to fail in alpha or even beta than in production.
- being flexible. This approach allows the customer early sight of the product so they can provide feedback and help shape the release, and we can respond to changing requirements and other environmental factors.

All of this is a direct contrast to the traditional waterfall process outlined earlier, where the customer only gets to see and use the product for real once it's fully implemented and deployed... and by then it's too late! With this approach we stand a much better chance of releasing the right product or service to our customers whilst still achieving quality through best practice.



Matt Hoey is IS Change and Service Quality Manager at Grant Thornton UK LLP and Sue Cater is Operational Assurance Manager at Atos. Here they represent the ITSMF UK Service Transition SIG.

Figure 2: Agile release management



itSMF UK



EVENTS NEWS FROM ITSMF UK

Join us for a special seminar in London on 26 September, FREE to members: ITIL PRACTITIONER IN A DEVOPS WORLD

How can users most successfully combine the practically oriented view of ITIL espoused by the new ITIL Practitioner with the flexibility of DevOps? Which approach is best in what circumstances, and is the 'fail fast, recover quickly' philosophy of DevOps appropriate to organisations that have invested heavily in ITIL to provide the true resilience demanded by their businesses? This event offers a unique range of perspectives of the ITIL Practitioner and DevOps, underlining the real strengths that each approach brings to the table and assessing the importance of the Practitioner for learning and certification for current and future needs.

OTHER FORTHCOMING EVENTS IN 2016

Masterclass: Major Incident Management 13 September 2016, London

Workshop: The Service Catalogue 15 September 2016, London

Midland Region Member Meeting 23 September 2016, Milton Keynes

Workshop: Shift Left 4 October 2016, London

Scotland Region Member Meeting 5 October 2016, Edinburgh

Masterclass: DevOps in an ITSM world 13 October 2016, Wokingham, Berkshire

London and SE Region Member Meeting 18 October, London South West & Wales Region Member Meeting 20 October 2016, Exeter, Devon

Masterclass: Proactive Problem Management 1 November 2016, location tbc

North Region Member Meeting 3 November 2016, Washington, Tyne and Wear

Workshop: Change and Release Management 8 November 2016, location tbc

ITSM16 Conference & Exhibition 21 November 2016, London Heathrow

Workshop: Cybersecurity 8 December 2016, location tbc

To book your place or check out the details, visit www.itsmf.co.uk

Applicable Limited is, as one of its people put it, "a small company that does big things, and continually aspires to be better". Aaron Stafford tells the story of how a small IT business took the best of service management practices and the ITIL framework and, through the efforts of its talented people, transformed itself into the name behind some of the world's largest brands.

Best practice beyond the age of heroes

Service Management at CAPPlicable

As a small Bristol-based hosted email company of 40 staff and a user base of around 30,000 users, the rapid commoditisation of cloud-based email posed a significant challenge for Applicable. While competing against the aggressive pricing of one-size-fits-all public cloud services, in the past three years we've successfully distinguished ourselves as an enterprisescale provider of private and hybrid-cloud Unified Communications (UC) services. Today, Applicable employs more than a hundred people around the world, managing eight complex data centres and delivering bespoke UC services that enable a third of a million employees of global household names to do business.

How did we transform our little IT company into a managed service powerhouse, providing complex services at scale, while presenting customers with the level of customisation and service management attention they require? While it wasn't easy, neither was it a complex challenge. Broadly speaking, it came down to our ability to credibly manage complex services, at scale, while sustaining our culture of pragmatism, people focus and quality service management.

Capability

The scale, complexity and (for the end user) the immediacy of Unified Communications services required us to make a paradigm shift to large-scale virtualisation and management of real-time voice services. While our people threw themselves into becoming experts, as a business we had to assure ourselves, our partners and our potential customers that we knew what we were doing. We did this by committing ourselves to vendor best practice and submitting our designs to vendor scrutiny and best-practice analysers.

We also recognised that our organisational structure and roles didn't support our aspiration to deliver the quality of service that our new, larger customers expected. We therefore professionalised and ring-fenced key capabilities. We aligned ourselves with the ITIL framework and freed up managerial horsepower to run it, professionalised our Customer Service Management (CSM) function, and spun up a team dedicated to continually improving our tools and behaviour.

Previously our managers wore a number of hats and many contributed in their previous area of expertise. A distracted manager views the world too tactically for a business to take on the challenge we set ourselves. To exploit the value inherent in a leader whose sight is appropriately elevated and whose head is free to create, we challenged and supported our managers to head up new ITIL-aligned business units: Service Design, Service Transition, and Service Operations. The focus and crossfunctional interplay between these well-led functions today provides us an effective and pragmatic framework of flow, responsibility, specialisation and improvement.

While our commitment to the technical and process aspects of service management have been key to our customers' satisfaction, Customer Service Management (CSM) was historically a part-time role at Applicable. CSM was reactive and personality-driven with mixed results that were reflected in our customer retention. To differentiate ourselves from the world's public-cloud offerings we had to deliver genuinely bespoke services, perceived by our customers as meeting their needs and delivering the value and care for which they pay a premium. To succeed we needed dedicated and top-notch customer service managers. Recognising that CSM talent wasn't inherent in Applicable, we introduced a new member to our team to build and head an Applicable CSM practice. Our brand of CSM, which today draws on both new and untapped latent talent, is key to our success as a bespoke cloud services provider. By proactively working with our customers to align perceptions, head off issues, and grow our goodwill credit, our CSM team reduce our cost of delivery and increase customer satisfaction, retention and the potential for deal growth. Furthermore, they exemplify a service-focussed behaviour that today pervades our culture in operations and back up our value chain.





Ideally Continual Service Improvement (CSI) means addressing the important issues to prevent them from becoming urgent. Our previously reactive reality was to gather a band of heroes from their day jobs to tackle something that had been neglected for too long. To provide ourselves a solid foundation for the future, we performed an honest drains-up review of the maturity of our processes and tooling, and contrasted them with the maturity we agreed was necessary to achieve our aims. We created a prioritised roadmap of undertakings to close our gaps, and (here's the cool bit) we spun up a team tasked with the management and progression of that roadmap. After working through a smouldering backlog of neglected items, the team today delivers genuine innovation. We are now realising significant reduction in both risk and cost (financial and person) through automation, better maintenance practices, and frankly just having talented stewardship of the CSI of our enabling functions.

Scalability

While successful at small-scale projects, our willingness to virtually invent each new service from the ground-up and resource both project and support work from a single talent pool were clear blockers to costeffective growth and providing our people with rewarding careers.

At-scale cloud hosting, even bespoke private and hybrid cloud services, is only possible if based upon a service catalogue of set pieces. Those pieces must be well defined, and we as a business must be clear with

our customers where and to what extent we're willing to customise. Embarking upon our journey, we had some idea of what we couldn't afford to customise, but in the main we had to learn what was saleable. Striking a balance to enable our sales force, while preventing them from selling a service that is neither profitable nor deliverable, is a challenge that will be familiar to many. Trust, courage and pragmatism were, and remain, key to our success. Our sales force trusts our operations group to represent the risk of going off-piste in a pragmatic and timely manner. By doing so, both parties agree the necessary compromises to enable a sale, while not unduly impacting our operational scalability nor delivery of services to our existing customer base.

"Trust, courage and pragmatism were, and remain, key to our success..."

We on-board new customers through the efforts of our Project Delivery group. Project Delivery work closely with our Service Transition group as they funnel

each new customer service, its processes, infrastructure, and support interfaces into becoming a manageable service to be run by our Service Operations. Applicable's resource pool was once a single group of operations staff into which project managers dipped to populate their projects. Absence of a Service Transition function was offset by sensible operations people implementing services that they could ultimately support. The idea was flawed as the success (or otherwise) of each new service could be traced back to a project team's composition of people and their perception of supportability. A greater challenge was the irreconcilable resourcing model: we found it incredibly hard to hire people experienced in both service management and professional services. The risk of hiring people with potential to grow in both fields was fraught and it subjected live services and in-flight projects to undue stretch-activity risk.

Furthermore, a single resource pool cannot satisfy the different investment risk profiles: service management resources must deliver a reliable service to earn a growing base of annuity revenue. Professional services resourcing represents Applicable's onboarding bandwidth as a function of our pipeline confidence and the expectations of our sales force and new customers. At scale, these two paradigms proved incompatible. By splitting our business into a professional services arm that delivers new services to our managed service arm, we recognise and manage two different paradigms. Service Transition, sandwiched between and representing the needs of the two, excels at bridging the divide and facilitating effective continual improvement.



Sustainability

It's all very well to build impressive capability and do it in a scalable way, however it is crucial that we never lose what makes Applicable special: our pragmatism, our enjoyable and supportive workplace and our diligent service delivery. We saw our move into a larger, more vibrant market as an opportunity to amplify what makes Applicable a great supplier and employer.

As previously stated, our Service Operations group must enable our sales force by delivering what they can sell. However, there is no point in selling something with an off-the-wall design or a non-sustainable support model, that compromises our ability to service our existing and growing customer base. Our commitment to our strategy, our product catalogue, and our structure and processes is solid. ITIL is in our DNA. So too is pragmatism and the courage and entrepreneurial spirit to see an opportunity, to collaboratively identify the delta from our standards, and to agree the art of the possible.

Applicable's history is peppered with heroes who took on big tasks, who went above and beyond to pull the company through tough times and secure key opportunities. Meanwhile the rest of the team picked up the business-as-usual slack left by those off performing heroic deeds. While undeniably exciting, an age of heroes is neither a mature nor sustainable way to run a business. Today, our team continues to be full of talented and committed people, who seek a rewarding career and want the best for the company and their peers. With more resources at our disposal, we owe it to our people to make working at Applicable a balanced endeavour where a good day's work deserves, and is made possible by, a good night's rest. While increasing automation and strengthening tooling are key contributors, growing our talent pool across all of our geographical regions has been key. As we grow our regional

centres with local talent, we move closer to delivering any capability at any time through people who are working in their daylight hours. This reduces our need for 24-hour shifts and heroes as we realise a key benefit: at the end of a work day, our people can switch off and have a personal life.

According to our customers' feedback, what sets Applicable apart is the diligence and care we demonstrate when delivering our services. As we grew, so too did the importance of balancing the cost of attention and care verses the customer-satisfaction benefits they engender. Our new CSM practice was key to maintaining the balance. Internally, customer service managers foster our service culture, looking beyond simple availability and seeking opportunities to add value within the swings-and-roundabouts context of profitability. This initially meant busy managers sense-checking well-meant behaviour, but over time their values rubbed off on everyone. Externally, they manage our goodwill credit with each customer. Each member of the CSM team actively manages their customers' perception of how Applicable 'honours the deal', as they maintain an open, almost casual tally of the 'overs and unders' both we and the customer generate through the life of each deal. This behaviour leads to mature business relationships based on trust and demonstrably smooths the way for growth and retention.

Conclusion

At Applicable, we've realised our vision of successfully delivering cloudbased UC services to large customers across the globe. By recognising our weaknesses, and that which makes us special, we have created a business deeply rooted in the best of service management practices and the ITIL framework, tempered with pragmatism and an entrepreneurial spirit. Although we've doubled our size and increased our user base by a factor of ten, our transformation continues. However, our customers are happy, our pipeline is unprecedentedly healthy and our people see the benefits of playing their part in our journey. Applicable remains the small company that does big things and continually aspires to do service management better.



Aaron Stafford is Head of Service Operations at Applicable.

Intelligent asset management in life-critical applications

200 300 MQ

lan Harris investigates the application of service management principles in fire engineering, and considers a group of critical service providers who face many of the same asset management challenges and opportunities as their IT service colleagues.

In the ITSM community we talk of risk, event, problem and incident management, request fulfilment, continual service improvement, asset and supplier management – business as usual. If we look around the many service industries, however, we can find like-minded professionals who share the same language as those in ITSM.

The Fire Engineering Team at the University of Central Lancashire (UCLan) School of Engineering have recently turned their attention to developing service solutions to help address some of their daily challenges – a task with which Cyient has been assisting. The project has highlighted the marked similarities that exist across enterprise service management in all its many forms.

Maintaining compliance in a complex estate

FIRE

ALARM

To develop a robust service offering for the fire safety management community, it is essential to understand more about the operating terrain and the multiple challenges they face as they work to reduce the risks from fire to life, property, assets, service continuity and the environment.

UCLan's environment contains an increasingly diverse and geographically scattered estate, providing accommodation, work and leisure areas for healthcare, education, university campuses and social housing providers. There may be newly built, carefully designed, innovative premises that benefit from fire engineered solutions but these are often interspersed with substantially older structures that were code compliant when built yet are now only just fit for current purpose. Financial and operational constraints mean that on-site building managers are becoming the exception and critical assets may only receive the absolute minimum, and often infrequent, attention.

Additionally the fire services, as enforcers for fire safety, are now turning their attention to other aspects of compliance, in addition to the requirement for risk assessment and effective management arrangements, to matters that reach across entire estates and that involve having suitable maintenance



arrangements for fire safety critical assets, for communicating and cooperating, and for providing adequate training for the workforce.

Assets, artefacts and activities

In a risk management system there will be many assets, artefacts and activities that are essential components for fire safety and a fire risk manager needs to monitor and measure the performance of all these system components, preferably proactively, before any untoward event or incident occurs. Incidents include the Unwanted Fire Signal (or 'false alarm') due to poor process control or the deliberate actions of building occupants, electrical arcing at a distribution board, or even malicious attempts at fire-setting by an arsonist.

Fire safety assets fall into three categories:

- Active fire protection is probably the most familiar and recognisable, in the form of alarm and detection systems that respond to changes in the environment and provide early warning to evacuate the premises.
- Passive fire protection includes the integral components of structural fire protection. Their purpose is to contain fires or slow the spread of smoke and flames through the building, to afford people time to make a safe exit and to limit damage to the property. Passive protection is a particularly apt term here as some of these assets,

the fire resisting doors (with self-closing mechanisms, acoustic closing devices, detentes, maglocks etc), fire shutters and dampers in ductwork, simply sit there, waiting to receive signals from the alarm system initiating them, and closing in a timely manner to limit the spread of smoke through ceiling spaces, voids, and ductwork, whilst also protecting atria and escape routes.

 The third category of fire safety asset, one that is often overlooked, are the people who occupy the buildings, and who are most likely to understand the real, day-today issues for fire safety. It is all too easy to blame the human components when something goes wrong in any system but properly trained and supported fire wardens can become part of the solution, as will be seen later.

Smarter asset management – smart active fire protection

Today, there are automatic fire detection systems which communicate with watch stations and are able to summon assistance from remote sources. Even domestic smoke detectors communicate wirelessly with security alarm systems, using 3G to communicate with a watch station that determines the appropriate emergency service response. Active fire protection is an area that is already starting to exploit cloud and IoT sensor-based solutions. Let us consider one critical area of fire protection that could benefit from innovative solutions.

Fire doors: containment-critical assets

In newly built premises, the property managers will be expected to have made a significant investment in a traditional IT architecture, with all the fire protection assets being documented in an asset management system. In-house or contract maintenance staff may use handheld devices to communicate the inspection results to a computer-aided facilities management system, or report defects to a contractor helpdesk.

However across the diverse, scattered and aging estates more commonly found in healthcare, education, university campuses and social housing one particular passive asset tends to be routinely neglected, abused and ignored. The fire doors, or containment-critical doors, are costly, highly specified, certificated and highly specialised components of a passive fire protection system that must be installed and maintained by competent contractors, not simply for basic compliance, but to ensure they will always function as intended if they are ever needed to keep escape routes free from smoke long enough to all people to make a safe exit from a burning building. However it is likely that many organisations lack the

expertise and asset management process to be certain that they know where their fire doors are located, how many they have, what level of protection they should provide, what their provenance is, and more importantly what condition they are in right now.



The sword

Every profession tends to struggle with the issue of 'thinking inside its own silo' and fire professionals will admit to being just as prone to this as anyone in the service management community. Competent fire safety advisers are often found working alongside estates and facilities managers whilst health and safety advisers are to be found in the main governance structure, advising the Head of Risk or operating as part of the HR function. As in any organisation there is a risk that fire managers remain in their domain, and rarely do they seek out and share with other professionals who might just be talking the same language, preferring to try and devise solutions in isolation.

Collaborating to face the challenges

Having already established that other professionals use the same service management language, can IT service management provide solutions for these requirements? Can they exploit cloud and Internet of Things (IoT) developments to effectively manage their fire protection assets, and resolve the particular issues they face with maintaining their costly fire-door assets in a fit for purpose condition? Are there potential solutions that will not only help them gain and maintain the basic statutory compliance, but will also help key decision makers make more informed choices about repair, replacement, and upgrade to ensure compliance and service readiness?

Fire risk management systems

A further aspect of a shared language for IT service management and fire management professionals is a continual improvement cycle. By drawing inspiration from the iconic London Tube Map designed by Harry Beck in the 1930s, and taking a Plan-Do-Check-

Act Central Line approach, it is possible to provide a highly visual overview of the essential components of a fire (or safety) management system. Originally proposed as a system navigator map illustrating all the requisite activities visible at each 'station' for effective risk management in a community healthcare environment, the Fire Management Tube Map (see page 24) can be amended to provide a compelling and easily accessible performance management workflow that allows system/risk managers to see at a glance the status of all their essential fire components, providing real-time asset information and service assurance to all the relevant parties.

Smarter asset management – smart passive fire protection

With the process architecture defined, we should return to the matter of asset tracking and maintenance. What can IT service management offer potential customers here? Large organisations, well-resourced, sited in a single geographical location, using traditional IT architectures with handheld devices deployed by an in-house workforce may be reasonably comfortable for now, but the other estate holders outlined above could definitely gain more.

By adopting the principles of resilience engineering all their places of work, all the places they provide services, can become largely self-sustaining for fire risk management. Training Needs Analysis (TNA) will identify suitable fire wardens, drawn from across the workforce, as they are the ones who fully understand the assets and challenges at their work locations. In the near future it is easy to see a confident and capable workforce who are carrying out their own routine fire safety inspections. They will be using well designed smart apps on a range of handheld devices and across platforms, with clear self-guiding instructions and an accessible graphical interface to document the state and status of the critical assets. checking for non-conformances and raising defects and issues as needed to the facilities management team.

Never forget that employees who are most familiar with the site will also be best placed to spot if the containment-critical assets are becoming damaged through regular use: gaps opening, hinges dropping, self-closers not working, leaves warping, seals missing and in need of immediate attention.

The Internet of Things (IoT) is set to change the way we measure, monitor and manage the assets within our organisation. Every fire critical asset, be it a fire door, automatic door closing mechanisms, a fire shutter, or fire dampers in ductwork requires a regular maintenance schedule, not just for legal compliance but to provide assurance of performance if fire ever does break out.

What if we were to upgrade these seemingly silent, static assets into smart assets, designed to respond to events which

occur within the fire safety ecosystem? Predictive maintenance uses data analytics on historical performance and availability data of each asset, and we can combine this with automated workflow management. A conventional IT facilities management system will send time-based reminders to managers to contact specialist contractors to carry out a service visit on a certain date. What if we could provide a solution, with embedded chips, enabling the assets to initiate the request themselves? The smart passive asset would initiate the dialogue, and use the low power communication protocols such as SigFox, Zigbee or LoRaWan to communicate with nearby IoT devices and daisy chain the service notifications to remote facilities managers or competent contractors. Contractors can confirm that the work has been carried out and this would allow managers to concentrate more on contract management and less on administration.

An added benefit of making the assets smart, particularly by embedding a chip in a certified fire door, is as a safeguard against counterfeit products. Certified fire doors already carry appropriate markings allowing their provenance to be established. Whilst there have not yet been any documented cases of counterfeit fire doors, in the financially constrained terrain there will always be a temptation to purchase uncertified products. A recent case of counterfeit fire-resistant glazing has indeed come to light in hospital premises in Northern Ireland.

Collaboration is the key

In conclusion, at Cyient we believe that the best practice approach we have built for intelligent asset management, IT self-service and smarter IT service management within our telecommunication and utilities client organisations can bring real improvement to the management of life-critical resources within the fire management domain. Principles and processes familiar within ITSM really can have a significant impact across the entire span of enterprise service management.



Ian Harris is the Service Management and Assurance Practice Leader for Cyient Europe. Cyient is a global provider of engineering services. From IT Service Management solutions to advanced data analytics, they specialise in communications, utilities, transportation, aerospace and healthcare.

The Service Design Roadmap

In view of the complexity of today's IT services, a good Service Design roadmap is an essential tool for all architects. Suzanne Slatter and the Service Design SIG have risen to the challenge of navigating a path through the design minefield.

Modern IT services and solutions are rarely straightforward propositions, and may involve multiple technologies and stakeholders (customers/consumers and suppliers/ partners), as well as complex governance frameworks potentially spanning markets, geographies, and cultures. All of these factors must play into the process for designing IT services that are both fit for purpose (warranty) and fit for use (utility). Service architects must, therefore, ensure that they have access to a structured and repeatable framework for Service Design, tailored to their organisation, and flexible enough to accommodate any given design scenario.

It is worth noting that the concept of IT Service Design has varying connotations depending on the type of organisation you are designing the service for, or within. For example:

Internal IT organisation - likely to be designing services to be consumed by internal customers

Managed service provider - likely to be

designing services to deliver on behalf of client organisations

IT product vendor - likely to be designing products that are consumed by customer organisations.

Although not a comprehensive list of organisational models, these three examples do at least demonstrate the need for subtle but important variations in the considerations for product or service design. The good news is, however, that despite all this potential variety and complexity, the process for actually designing a service is relatively straightforward and, with appropriate preparation, can be applied consistently in the vast majority of scenarios.

The roadmap has been developed by the Service Design Special Interest Group (SD SIG) to provide complementary guidance to the ITIL material in a concise and easily digested form. The SD SIG created the concept of this roadmap to provide readers with a focus for agreeing the key activities



The Service Design Roadmap

required to establish and operate a Service Design process within any organisation.

The roadmap considers the initial business drivers triggering the process, and the subsequent steps, inputs, activities and outputs that must be defined to initiate a requirement for either a new product or service, a changed product or service, or one that is to undergo some form of material transition (e.g. a data centre move, outsourcing a service etc.). It then focusses on the activities for which an IT service provider is typically accountable to develop an effective design to achieve a successful business outcome.

The roadmap for defining the Service Design process is shown on the page 26. It demonstrates the three key elements of any given framework:

- The necessity to plan for service design and develop the necessary framework for delivery
- The need to establish business requirements and associated commitment
- The translation of business requirements into technology solutions through the execution of the design stages.

Planning for Service Design is covered in detail within the core ITIL Service Design publication so will not be covered in further detail here.

The following sections of this article will outline the various steps within the Service Design roadmap shown here, and will provide guidance on the various inputs, outputs, and activities that will require consideration for each.

Types of change

Business-driven change can manifest itself in multiple different ways and via various different channels. How this change is captured and channelled into a pipeline



of work for the business to complete is outside of the scope of this article, but must be considered when attempting to define the engagement mechanisms into any Service Design process. Fundamentally, however, the change will arrive in the form of a requirement, which may be very straightforward or highly complex, but is generally somewhere in between.

Often the degree of complexity is unknown until further analysis is undertaken. In order to establish the true nature of the change, and the degree of complexity therein (and thus be able to estimate the likely costs and effort involved in developing and delivering the service or solution), the business must complete a process generally referred to as Requirements Analysis and Definition.

Requirements may be both technical and non-technical in nature, and all must be considered together to ensure that a cohesive solution is developed. The process of Service Design, however, should focus on those requirements where a clear understanding is necessary, to ensure that the ultimate solution possesses both utility and warranty, for all stakeholders, for the (projected) life of the service, and within the limitations and constraints laid down by the business (or customer).

Those requirements not specifically pertaining to the functional capability of the solution (i.e. what the service is supposed to accomplish, what the end users will use it for and the manner in which they will use it) are referred to as the Non-Functional Requirements (NFRs). These tend to define the quality (or other) constraints or targets that will influence the design of the end-toend system, as opposed to specific individual behaviours or functions within the system.

The non-functional requirements and all other factors that will input to the construction of a sound service design will fundamentally be driven by the type of change that is being introduced by the business (and the IT department can very much be considered 'the business' in this context). Individual organisations should define their own thresholds for what is considered material change that should necessitate Service Design governance (this could be, for instance, a change being delivered as a formal project). Invariably such changes will fall into one of three categories:

A new product or service e.g. a new payroll system based on a new technology

A change to an incumbent product or

service e.g. a 'material' technology change to the HR system

A transitioned product or service e.g. a move of a service into the cloud or an MSP

The Design Strategy must, from the outset, consider the implications of the change on the organisation, existing technology platforms, support teams, supplier organisations, governance frameworks etc., in light of the relevant category within which the change falls.

Service Design Roadmap Stages - Requirements Definition & Validation

Stage 1: Review/update strategy

Business (or IT) change can manifest itself via various channels and is instigated via a myriad of triggers. Some examples of these triggers (inputs) are described in Stage 1. The decision to execute business change must be assessed on the basis of the value the change will add back to the business weighed against the cost and the risk of doing it (or not doing it!). Once assessed, and with sufficient authority to proceed, the core requirements for any individual change should be drafted in an appriopriate format (each organisation will have their own processes and products for this activity, but some examples are shown here as outputs). It is important to note that, at this stage, detail is likely to be light and the

1. Review / Update Strategy

Inputs

- 5 Business Strategy 5 Existing CSI plans / operational feedback
 - Project Lessons Learned
- § Compliance / regulatory requirements
- Security / risk drivers
- Natural lifecycle triggers eg End of Life

services, asset reviews

Activities § Confirm Business Strategy

- 5 Confirm Business Strategy 5 Understand competitor and / or market edge drivers
- 5 Define and prioritise Business Requirements
- 5 Develop proposal

Outputs

- Business Requirements statement / document
- Project proposal

requirement may be considered conceptual. Project proposals and/or business cases may be drafted at this stage, but it is likely that there will be insufficient data available to complete them until later stages of the process have completed.

Stage 2: Identified requirement

With the high-level requirement now drafted, the business should seek to more clearly describe the core solution requirements and the benefits to the business that these will bring if delivered. Various options should be considered, and sufficient information should be presented back to business decision makers as to why the project (change) should proceed. Business case proposals should take input from all key stakeholder groups and subject matter experts, including those from within technology departments and/ or suppliers. Service architects may well contribute towards any initial feasibility studies or analysis. The output from this activity should culminate in some form of

2. Identified Requirement	Activities § Options Review: Timescales, Expectations / Benefits, Architectural input, Do
Inputs 5 Business Requirements statement / document 5 Project Proposal	Nothing, Return on Investment (Rol) if valid, High level Business Impact Analysis (BIA), Current & Future needs Engage service provider(s) for initial inputs into Business Case Seek budget commitment
	Outputs § Commitment to proceed § Draft business case

formal business case that, whilst still reliant on a number of assumptions (there will still be many unknowns at this stage), will provide decision makers with sufficient detail to be able to evaluate the proposal and provide formal authority to proceed (see next step).

Stage 3: Obtain commitment

At this stage the senior business decision maker(s) should take a decision as to whether to proceed with the project. It is likely that this will require both financial and nonfinancial commitment, and approved scope may well be time-boxed or tied to specific project stage gates. All activities at this stage should support the development of detailed analyses of why the business should undertake the project (e.g. alignment to strategy, cost benefit, increased market share etc.) relative to the risk exposure of not doing it, and the estimated cost of delivery. Service architects play a key role here in assessing the likely costs involved, both from a project perspective (e.g. the transition costs) and an operational perspective (e.g. run costs). They should also be able to help articulate the risks associated with the change (both of doing it and not doing it), develop the

3. Obtain Commitment	Activities § Undertake RAID on current state § Undertake cost / benefit analysis	
Inputs § Recommendations from Options Review § Commitment to proceed	Source Cost / Definition analysis Analysis of service costs to date Develop Business Outcomes statement – define key objective Confirmed business requirements Engagement with business owners & IT stakeholders	
	Outputs 5 Business case sign-off 5 Alignment of business objectives & expected outcomes 5 Definition of what would good look like 5 Benefits statement, including time to realise benefit	

primary outcome statements pertaining to the delivery of the service, and aid business case authors in establishing the cost position to support cost/benefit analysis.

For many organisations, this will be the entry gate to project management governance,

at which point the delivery will conform to project management processes, stage gates, approval procedures etc. These will vary from organisation to organisation, and Service Design frameworks may need to be tailored to align accordingly.

Stage 4: Issue requirement

By this stage the core project team should have been identified and subject matter experts will be in a position to begin analysing the requirements in further detail, and with senior stakeholder (and thus business) commitment. For the service architect, the primary activity here will be the translation of business objectives and outcomes into the first pass of NFRs that will inform the solution design. It is not uncommon for non-technical service stakeholders to be unfamiliar with the concept of non-functional requirements, either in part or in full, and may need guidance on the primary principles (e.g. SLRs, SLAs, KPIs, process metrics and measures, targets and thresholds etc.). acronyms and abbreviations, and how these can impact business outcomes. Stakeholders should also be provided with guidance over the ramifications of certain decisions which may influence those requirements, such as the cost or risk implications of achieving, or not achieving, certain targets or objectives. Such conversations would normally take place within a workshop environment, but ultimately



there should be a single business stakeholder (owner) for each non-functional requirement who will take the overall decision as to its inclusion in the design and mandate the quality (or other) criteria by which each should be met.

Requirements should be prioritised (a MoSCoW approach often works well) such that effort is placed on ensuring that those critical NFRs are met, with perhaps reduced emphasis placed on those that could be considered nice to have. All NFRs should relate directly to an outcome. Multiple NFRs can relate to a single outcome.

Requirements must be achievable (within the technical and cost constraints of the solution, although these may not all be known at this time) and plans should be made for quantifying the successful delivery on NFRs, either through testing or other strategies.

All requirements should be documented appropriately. The format of such

documentation is not vital, so long as the key data is captured for each NFR: a unique reference, a named owner (preferably from within the business and likely to be the service or product owner), a description of the requirement in words, any targets or thresholds associated with the requirements, any processes associated with the requirement, the priority, and the area of the system or service the requirement relates to. A good level of documentation will help articulate the objective and demonstrate achievement later in the process.

Service Design and Planning

Stage 5: Interpret requirements

With the initial set of NFRs defined and published, the project team must now expand on these to establish how they will be achieved in the context of the design. NFRs simply dictate a requirement, or a quality objective, but do not provide guidance as to how they may be achieved. Working with project and design stakeholders, including any third-party organisations, the service architect should ensure that all non-functional requirements are communicated and understood.

Technical and solution architects will need to understand the requirements for, for instance, availability of the service, as this may have very fundamental ramifications for the technical design of the solution (e.g. resilience, failover, selfhealing etc.). Operational service teams will need to understand the expectations of them regarding, for example, incident management, such that they can provide the service architect with the necessary guidance on what provisions may need to be made to ensure operational readiness at service inception. Business continuity stakeholders will need to understand continuity and recovery requirements so that they may factor these into their strategy and plans. There must also be close collaboration with supplier and partner organisations to ensure that they are aware of commitments that will impact either new, or existing, service agreements.

5. Interpret Requirements

Inputs

- § Procurement / Tender / Statement of Requirement
- Business objectives & expected outcomes
 Functional & non-functional
- requirements with MoSCoW analysis § Intended Service Level Agreement
- § Requirements Traceability Matrix § Initial RACI model

agreements

Requirements management process

Implement formal tracking of requirements management

Assess & understand implications for commercial support

Assess supplier capability to deliver (if 3rd parties involved)

Develop initial RACI model for delivery of requirements

Activities

ş

ş

5

Outputs

This process of dialogue will help to establish a common understanding of the requirements for the design of the service such that they are not a surprise to either project or delivery teams at a stage when it is too late to effectively address them. It will also help achieve a consensus on certain key concepts relevant to design (e.g. resilience requirements) and ensure that any key risks pertaining to either the delivery, or subsequent maintenance of, those requirements are clearly communicated to all relevant stakeholders (and early enough in the process to potentially address).

As requirements are discussed, decisions are agreed upon, and detail is drawn out, this must be captured in High Level Design (HLD) documentation. At this stage it is possible that no HLD will exist, so this detail may need to be captured elsewhere. To aid

Stage 6: Develop design

By now it is likely that technical architects or 'solutioners' are in the process of pulling together high-level designs, building on the conceptual models defined within the business case (or similar) and using data obtained from both function and nonfunctional requirements. Service architects should be doing likewise here, taking data primarily from the NFRs to drive decisions around scope, quality etc., whilst applying these to the technical solution being developed. These must go hand in hand, so it is imperative that both technical and service architects work in close collaboration to ensure a successful design.

Depending on the size, scope and complexity of the service being designed (and subsequent solution), a large number of activities may take place during this stage, each generating various outputs that will feed later stages of design and validation.

Service architects should rely as much as possible here on industrialised process and models to ensure a cohesive and consistent approach to the design of services, considering and evaluating the integrity of the entire solution as an end to end service. With time the service design framework will become more mature and require less rework with each iteration. Service designs should be based on a known and trusted approach, which is then tailored by exception to meet the unique requirements any given solution. By leveraging known models and approaches, it aids the cost estimation process and reduces risk. Where requirements mandate that there are exceptions to the standards, these may increase cost or introduce additional risk (both to successful delivery of the project and of the service in production) due to the inherent unknowns they introduce. Such decisions and associated risks should be captured in project RAID documentation (or similar).

Many of the core Service Design products can begin to be drafted at this stage, and

the tracking of requirements to the solution detail that sits behind them (which will be created as the project progresses and designs are fleshed out), a traceability matrix can be produced. Generally a spreadsheet or similar, the traceability matrix will provide a lookup mechanism for individual top level NFRs (i.e. business outcomes) against section references within HLD, detailed design, service definition or other appropriate documentation that describe how the NFRs will be achieved. This matrix should be maintained throughout the project (particularly within the design stages) to ensure that project stakeholders have access to accurate and up-to-date information on the progress of the service designs against business requirements.

populated with whatever design decisions have been taken to date. By creating draft versions of, for instance, the service definition, this can act as an aide memoire to service architects and other project stakeholders as to the necessary detail that must be driven out of design activities. Basic estimating models should be employed at this stage to establish projected service model scope and costs, and these should be consistently re-appraised as new information comes to light, or changes to scope are introduced.

As designs progress, the service architect should maintain regular contact with key stakeholders to ensure they are appraised of the solution design progress, and have an opportunity to flag risks or issues, inform the design or revaluate decisions made (particularly with regards to the nonfunctional requirements). NFRs should consistently be revaluated and revalidated throughout the design process to ensure that they remain appropriate and aligned to the business's (potentially changing) needs. In addition to this, any mandated service acceptance criteria that may exist should be reviewed and cross-checked to ensure that designs have taken them into account and that efforts to deliver on those criteria have been sufficiently scoped into project timescales and resource plans and costs.

The service architect should actively query design decisions (flagging any risks as appropriate) taken by the design team to ensure that they continue to support and align to the non-functional requirements specified, particularly where such decisions may place unwarranted impact on existing production systems, services or operations. The service architect has a responsibility to ensure that services are designed sympathetically to the incumbent service environment and organisation.

All products produced at this stage will contribute toward the establishment of the Service Design Package (SDP) and should be regularly updated and maintained in situ with other project design documentation.

Stage 7: Clarification & dialogue

High-level designs should be validated to ensure that design communities are on the right track. Validation of designs should take place, wherever possible, via direct dialogue to avoid misinterpretation (supported by accurate documentation). Service architects should begin the process of validating their assumptions regarding the non-functional requirements. This will require dialogue with service sponsors and stakeholders to ensure that the requirements defined early in the design lifecycle are still accurate now, particularly in light of cost and effort estimates that, by now, should exist to a degree of clarity that can inform decision making (e.g. "Do you still really want those three nines?!"). Equally, technical designers should be consulted to ensure that the technical solution, once implemented, will be able to support NFRs (particularly those underpinned by technology, e.g. availability targets). Designs must also be cross-checked

6. Develop Design

Inputs

- **Requirements Traceability Matrix** 6 Initial RACI model ŝ

 - Validated functional and non-functional requirements
 - Business Case, Terms of Reference (ToR)
 - or equivalent Technical Architecture and/or High Level
 - Design (HLD)
- Project / Programme Plan or equivalent 5 Project / Programme Stakeholder Map \$
- Due Diligence output Current Operating Model(s)

Activities

- Functional & non-functional requirements validation (ongoing) 5
- ŝ Maintain Project / Programme Plan or equivalent
- Continue to understand & impact assess Due Diligence output 5
- ŝ Define Strategic or Commercial 'hot buttons', constraints, risks etc.
- ş **Establish Service Landscape**
- 5 **High Level Design formation Draft Target Operating Model**
- 5 ş **Draft Service Definition**
- **Develop Service Models / Estimates** 5
- ş **Baseline Cost Model draft**
- 5 Feasibility Study of Design
- Service Impact Assessment 5
- 5 Strategic Alignment Assessment
- Technical and Service Design Authority review of solution
- 5 **Develop Service Design RAID register**

Outputs

- ş High Level Design
- 6 **Draft Target Operating Model**
- **Draft Service Definition** 5
- **Baseline Cost Model**
- **Requirements Traceability Management**
- Service Design RAID register 5
 - Initial Service Design Package

7. Clarification & Dialogue	Activities § Update High Level Design (HLD)
Inputs § High Level Design § Business Requirements § Enterprise Architecture § Business Policies & Standards § Project Scale Estimator / Guidelines	 Gopdate high Level Design (HLD) Technical / Subject Matter Expert (SME) peer review for continu accuracy & correct interpretation of business requirements Verify that the design will meet the requirements and confirm to the solution has been designed to meet the requirements Determine whether the requirements can be met by an existing solution State whether the design is in line with business strategy Confirm that the solution will comply with policies, standards an architecture Update and track changes to the Requirements Traceability Mattion
	Outputs § Updated HLD - project size, cost calculations, governance § Updated Requirements Traceability Matrix § Updated Project RAID register

with appropriate elements of strategy or governance, and cost parameters should be double checked to ensure that budgets are not at risk. As usual, risk registers should be maintained and any new risks flagged as soon as possible within the relevant forums. At this stage it is important to consider whether any risks will be considered operationally acceptable and, if so, to agree, document and accept the associated constraints.

Stage 8: Detailed design

Sufficient detailed data should now exist for design teams to begin to compile detailed designs. At this stage service architects should have confidence that the requirements are fully understood and agreed, and that initial highlevel designs will meet those requirements. With the core variables now fixed, it should be possible to begin to define those more detailed products within the service design framework. These will vary from organisation to organisation, but are likely to include some form of service definition, detailing the various core elements and how the service will operate, process by process, along with a description of the target operating model.

It may be possible to begin to map out processes at this stage (although in some

8. Detailed Design	Activities 5 Business Process Design 5 Performance measures designed to meet Service Level		
High Level Design High Level Design Functional & Non-functional requirements Current & Target Operating Models Business Policies & Standards	Requirements Service Reporting Framework Resource demand profiled Staff skills & capability assessed Updated Project RAID register Constraints understood		
Customer Strategy Business Impact Assessment Level of Commitment known	Outputs § Service Definition § Technology Specification § Business Process Design § Service Reporting Framework § Financial Model § Updated Project RAID		

Benefits, value, outcomes identified

circumstances this might not be viable until the service is on-boarded). SLAs and associated Key Performance Indicators (KPIs) can be documented and, where necessary, contracts can be drafted such that contractual negotiations may begin to take place. Financial models should now be completed to reflect all elements of the design (both capital expenditure and operational expenditure, for the projected life of the service).

The service architect should also be

considering operational readiness in earnest by now, working with Operations (and possibly Quality) teams to ensure that service acceptance criteria are on track to be met in readiness for service implementation.

Stage 9: Validate design

In this final stage of solution design, prior to consideration of the transition, it is necessary to once again validate the design. In a similar manner to before (with high-level designs), the service architect, working with other design teams and project staff, should consult with the various business/customer stakeholders, third parties, end-user organisations, and quality or regulatory control functions (e.g. security and compliance) to ensure that the design meets both functional and non-functional requirements, and does so in conformance with design standards and other external constraints.

Validation may also include testing phases, against both the functional and nonfunctional elements of the solution. Failover and stress/soak testing will assist in validating resilience and capacity targets, for instance, whilst dress rehearsals can be performed against the various processes that must be delivered (and the tools that underpin them)

Stage 10: Plan for transition

Depending on the nature of the solution, design stages may well be followed by various test phases (or they may happen in parallel). Irrespective of the approach chosen, the need to prepare for transition is paramount.

Transition management has different connotations for different types of organisations. Within the context of the ITIL framework, transition management refers to that collection of processes that exist to facilitate the transition of service-related change into production environments. For a managed service provider organisation, however, transition management may be more accurately described as the process of service transfer, whereby the parties (and possibly the technology) responsible for delivering the service are 'transitioned' from the incumbent to the new service provider. The distinction here is subtle but important, as the skills and experience required to transition a service under different types of organisation will differ in ways that may mean the difference between success and failure.

Despite these variances, however, the core approach remains relatively consistent, and will consist of the planning and execution of various activities required to ensure that the service goes live with full approval to do so, risk remediated wherever possible. Any risks previously accepted as an operational risk should be reviewed at this time and, where appropriate, an entry made to the service improvement plan for future design considerations. Equally important is that production support and delivery functions are

Activities 9. Validate Design **Review** meetings Confirm that the design will achieve the quality / cost objectives Inputs and that warranty / utility considerations will be met Final Detailed Design provided for review 5 Identify reference cases; compare industry/competitor by Business / Customer benchmarking UAT / Feedback / Proof of Concept results Determine whether the value potential is still realistic and that 5 Return on Investment is achievable Ascertain the appetite & culture still for service implementation Outputs Business go / no-go decision

across internal and external organisations (e.g. incident management).

Financial models should be reviewed to ensure that designs fall within budgetary thresholds and, if necessary, pricing teams should begin the process of pricing the service. Service acceptance criteria should be reviewed and, where relevant, signed off. A successful outcome for the validation phase is that the appropriate business and IT stakeholders provide the necessary authorisation to proceed to the transition phase and deliver the service into production, handing over operational responsibility for the service to live service support and management teams.

10. Plan for Transition	Activities Early Life Support / Hypercare period agreed			
Inputs § Final Detailed Design § Business go/ no-go decision	 6 Implementation timing / PBA considerations reviewed 6 Service Catalogue updated 6 Setup Project / Implementation review meetings & 'war room' planning 6 Perform support pilot / dry-run / test scenarios 7 Develop Communications Plan 8 Develop Change Management Plan 8 Release & Deployment Plan developed 6 Service Stakeholder awareness 6 Create / update Continual Service Improvement Plan 6 Identify pilot / early adopters 7 Re-validate basic interfaces / process flows eg Incident Management, Problem Management, Config, Change etc 6 Knowledge transfer planning & activities 9 Define business & service supplier Service Acceptance Criteria for sign-off 			
	Outputs § Confirmed Service Design Package			

operationally ready to take on the service (or change to a service), and that all necessary service acceptance criteria have either been met or have a plan to be met during the transition phase.

Service architects will be expected to support this phase, providing the necessary deliverables, guidance and assurances to planning and transition functions to enable the development of well-formed transition plans and associated materials. The ultimate output from the transition planning phase will be a completed service design package, containing all relevant design, planning and operational support products and materials required to ensure a successful implementation of the service.



Suzanne Slatter is a consultant at Sopra Steria and chair of the ITSMF UK Service Design SIG

The IT service desk: first line of defence against cyberattacks

assword write. Welcome

The danger of cyberattacks keeps more CIOs awake at night than any other IT issue. But, argues Roberto Casetta, the IT service desk is ideally positioned to pick up the early warning signs.

When a device starts running slowly, or a business application starts frequently crashing, the user's first port of call is more likely to be to the service desk than the security team. Yet this can often be the first symptom that a malware infection has occurred which, if left undetected, could lead to a full-on data breach. For example, an investigation into the attack on US retailer Target, which cost the business \$53.7 million, revealed that there were many incidents which could have minimised the damage if spotted earlier. For this reason I believe a properly equipped IT service desk is best positioned within the organisation to detect and respond to cyber-attacks.

Cyber-attacks have compromised twothirds of big UK businesses in the last year, according to the government led Cyber Security Breaches Survey. These attacks utilised viruses, spyware and malware, costing some businesses millions of pounds. Even more shockingly, the survey revealed that seven out of ten of these attacks could have been prevented. Research varies, but estimates suggest that the average time wasted between a data breach and its discovery is somewhere between 80 to 200+ days. For the majority of these data breaches it is highly likely they would have prompted some tell-tale instance that had been logged with the service desk. The problem is that these incidents are being logged, but not actioned. The fact that it took them so long to pick up on this invaluable data therefore shows the level of disconnect between most IT service desk and security teams and the potential benefits of bringing them closer together.

The traditional idea that IT and security are separate disciplines should be broken down and rewritten as co-operation is vital to enabling secure and efficient operations. However, research from the SANS Institute research found that organisations rarely factor security into the overall help desk budget, and nearly 40 per cent of organisations have weak security policies around their help desks, or none at all.

The service desk is better positioned than any IT teams to mitigate risk, because it knows exactly what is inside the network, and is better placed to identify strange behaviours and meaningful trends. Routine requests that appear to have no bearing on IT security are very revealing if they start happening simultaneously across a number of different users and devices, and can work as a sort of early warning system against wider problems or cyber-attacks. It is for this reason that the service desk needs its own defences. As well as this, the security teams need to be integrated with the service desk in some way, whether via regular reporting, or more ad-hoc communications.

Furthermore, this requirement is only heightened by the growth of BYOD (bring your own device), which is proving a major threat to organisations' IT security. The security team often fails to protect the system because it lacks the insight that the service desk has from monitoring the network every day. You can't stop users from installing applications on their devices, so it

The IT service desk: first line of defence against cyberattacks

is hugely important that the service desk is monitoring when compromised devices are plugged into the network, and what social media and web apps are being launched internally. The security desk monitors the ordinary every day, so it is crucial that it has some sort of security mechanism to protect the system when it spots the abnormal.

The service desk needs to be the first line of defence for the reasons above, and thus needs to be equipped with the right tools. Automated patching should proactively manage operating systems and application vulnerabilities and endpoint protections should ensure that only authorised applications run. The ability to control data in and out of endpoints should be controlled via company-written policy, and application control and intelligent whitelisting should ensure end-point security. Taking the time to arm your service desk with these sorts of defences will result in efficiency and, consequently, a well-secured operating system that blocks the majority of incoming threats.

A service desk with the ability to view the network and all endpoints, as well as having the capability to react to, and control, anything that happens by identifying and responding to threats proactively is a remarkably cost-effective means of improving an organisation's entire security posture. Nobody would ever claim the service desk alone can protect an organisation from debilitating, costly and embarrassing security breaches. That requires multiple layers of security to combat the full security threat landscape. However, with the proliferation of malware and ransomware, which targets organisations of all sizes and across all industries, it surely makes sense to make the IT service desk the first line of defence.



Roberto Casetta is Senior Vice President of HEAT Software

For years organisations have been able to collect a variety of management information and metrics concerning their products and the services they provide, ensuring that they continue to meet agreed targets and service levels. Customer experience, however, presents more of a challenge – how do we measure that? **Kris Tarry investigates** some ground-breaking CX work at the Met Office.

Customer experience and SLM at the Met Office



Trish Lamb & Naomi Lawrence Customer Experience Managers



Chalky Langley Head of Customer Service





The Met Office takes customer experience very seriously. With one of the largest supercomputers in Europe, providing terabytes of data to the IT systems that deliver thousands of forecasts to a worldwide customer base, it has recently decided to add Customer Experience Managers to its service team. I recently spoke to Chalky Langley, Head of Customer Service at the Met Office, along with Naomi Lawrence and Trish Lamb, the new Customer Experience Managers, about the organisation's decision to use customer experience as part of their SLM strategy. What does CX mean to the Met Office? How do they plan to measure it and what benefits does the Met Office expect to see by adding it to their established SLM toolkit?

Trish and Naomi told us that Met Office customers are the reason they need service level management.

"Without our customers we wouldn't have any services to manage, so it made sense to include customer experience in our approach," said Naomi. "Today customers often have a number choices about where they can get the service or product they need, and the experience an individual receives when dealing with a company is becoming increasingly important in that decision-making process. Customer experience reflects the customer's perspective and provides some insight into the impacts the services we provide have on customers and their business. This means that we have a better appreciation of why we need to make our service levels reliable and

easy to access and use, and what it means to our customers when this doesn't happen.

"Customer experience has become a critical differentiator in the competitive and connected global marketplace of today. Managing customer experience effectively can deliver tangible value for both the customers and the business by increasing customer loyalty which in turn boosts revenue and reduces costs."

"There are a number of challenges ahead," added Trish, "and we are in the early stages of this initiative. First we need to get to grips with the 'journeys' that people take when they do business with us (or don't, as the case may be!). We are speaking with our customers to gain a picture of the steps they go through when they interact with the Met Office, to help us understand where processes can be streamlined to be more effective and easier for the customer. The main challenge this presents is one of change; understanding our customers' journeys is the first step in a significant transformation programme for the Met Office which is being driven by our customers' requirements. With this we intend to build a customer experience measurement framework which will extract insight from customer touch points across all our channels throughout the organisation, allowing us to respond to feedback without delay.

"Customer experience means putting the customer at the heart of everything we do, whether it be researching new areas in climate science or developing the Met Office app. We endeavour to meet or exceed our customers' expectations at every interaction. However, customer experience is not just about the service that customers receive at certain touch points. It is their entire 'relationship' with us, which often starts before they have any form of direct contact at all; the sum total of all their interactions, dealing with our employees, using our products and services, encountering our brand."

Chalky Langley, Head of Customer Service at the Met Office, summarised this view. "I believe a great customer experience can be a differentiator for any business and the Met Office is no exception. Increased customer satisfaction, loyalty and advocacy are all tangible business benefits that can be realised when the customer experience is managed effectively."



Kris Tarry is Service Acceptance Manager at the Met Office

ITSMF UK's **annual conference** and **exhibition**

itSMF UK



This year's event includes:

- Four dedicated tracks of educational presentations, interactive sessions and case studies supporting this year's theme "Professionalism in ITSM"
- Unparalleled networking opportunities
- ITSM exhibition featuring over 40 exhibitors
- Celebrated ITSM awards dinner
- Luxurious venue

Sofitel London Heathrow 21st - 22nd November 2016

www.**itsmf**.co.uk ■ conference@itsmf.co.uk T: 0118 918 6500 ■ Twitter #ITSM16

