Digital First

Why increasing information pressure is eroding productivity in local government and how a digital first approach can turn the tide.

by Simon Waller

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Over the last few years, digital technology has dramatically changed the way information and communication flows through organisations. In a very short time we have gone from an information drought to an information flood and many leaders are struggling to keep up.

This white paper looks at the challenges of information abundance and what we can do to both improve our capacity to deal with it, and ultimately turn down the pressure.

About
the author

Simon is one of Australia's leading thinkers on digital technology. He is the author of two books, *Analogosaurus: Avoiding Extinction in a World of Digital Business* and *The Digital Champion: Connecting the Dots Between People, Work and Technology*. Through his work, he has influenced individuals and organisations across Australia to engage with emerging digital technologies in new, more efficient ways.

Simon's unique perspective is built on his experience in corporate roles in business improvement, scenario planning and strategy development. Simon holds a Bachelor of Commerce and Master of Business Leadership and has post graduate qualifications in scenario planning and futures thinking.

Simon's strength is understanding business and focusing on the practical application of technology. He inspires people to think about the way their business works and how they can use technology to improve personal and business effectiveness.

You can find out more about Simon at simonwaller.com.au.

The overwhelm of information

The Digital Age has arrived. This is a turning point in human history. Economic activity is now dominated by the flow of information rather than the flow of material goods. The Digital Age has been made possible by increasingly sophisticated technologies that have left no industry and no job untouched.

The long term challenges (and opportunities) of machine learning, increased connectivity and rapid workforce automation are only just starting to surface. But as organisational leaders start formulating their plans for massive digital transformation, the more immediate impacts of digitisation are being left unaddressed.

For many, especially in information intensive industries such as government, the short term implications of digital technology and the dramatic improvement in our ability to create and share information is coming at a significant cost: time and attention.

In 1971 Noble Laureate Herbert Simon made the following observation:

"...in an information-rich world, the wealth of information means a dearth of something else: a scarcity of whatever it is that information consumes. What information consumes is rather obvious: it consumes the attention of its recipients. Hence a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it."[1]

In the 40 or so years since then, the amount of information in the world has exploded, much of it a result of digital technology. In fact 2002 was a tipping point whereby digital became the dominant format for storing the world's information, and by 2012 more than 90% of all information was created and stored in digital formats.

Of course it is not just at work where we struggle with increasing information pressure, Smart devices also have a negative impact on people's home lives. People are struggling to digest the endless

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[1] H A Simon, 'Designing Organizations for an Information-Rich World', in Martin Greenberger (Ed.), *Computers, Communication, and the Public Interest*, Baltimore, The Johns Hopkins Press, 1971, pp. 37-72.

stream of information that gets served up and the expectations of 24/7 availability mean they don't invest sufficiently in recovery activities, further adding to work related stress.[2]

These personal activities are significant but it is at work where the information pressure is highest and the impact most acute. And it is at the top of these organisations where the real pain is felt.

Information pull and information push

There are two main reasons why organisational leaders are feeling the brunt of increasing information pressure. The first is that in an increasingly dynamic and unpredictable operating environment decision makers need to access increasingly accurate and timely information. This need has created an 'information pull' towards the top of organisations where strategic decisions are traditionally made.

The second reason is that traditional organisational structures and communication channels encourage the flow of information towards the top. The hierarchy was devised to facilitate the coordination of activities in a time when sharing information was slow and difficult. This funnelling of information towards the top of organisations, or 'information push', was once an operational need, but the amount of information now moving around inside organisations means this funnelling has become a massive burden for organisational leaders.

The drought is over

Although the first tremors of information overload were identified by Herbert Simon (and by others even earlier) it feels like we have moved quickly from an information

drought to an information flood. This has left many organisational leaders still treating information as if it was a scarce resource even though it is now abundant.

In a drought the ability to access, capture and hoard information is a strategic advantage. The belief that 'knowledge is power' epitomises the drought mindset. It's based on the premise that knowledge and information is scarce and that controlling a disproportionate amount of it gives power and influence over others.

Of course hoarding a disproportionate amount of information in a flood makes very little sense at all. As more and more becomes available the value of each piece becomes less and less. In fact it is entirely possible that the cost of capture and storage is higher than the value of what is being stored.[3]

As pointed out by Herbert Simon, the primary cost of information management is paid with our attention. As the amount of information we are expected to manage increases and the the time we spend managing it goes up, then the amount of attention that we have to spend on other things goes down.

Many leaders are feeling stressed and overworked as a direct result of the information load they are now managing. They are spending more time managing emails and reading reports and as a result have less time for the things that matter, whether it be devising and implementing strategy, time spent with their team or even time spent with their family.

Clearly our current approach is broken, and for all the promise that digital technology brings we need to step back and rethink how we are using information.

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[2] Switching on and off … : Does smartphone use obstruct the possibility to engage in recovery activities? http://www.tandfonline.com/doi/pdf/10.1080/1359432X.2012.711013

[3] The most beautiful example of this flood analogy is the Victorian Desalination Plant in Victoria, Australia. The plant was built at a cost of $4 billion at a time when a 10 year drought had halved the inflow into Victorian water reservoirs. Unfortunately by the time the plant was completed in 2012 a few years of good rain meant Victoria's reservoirs were by then 80% full. And although it might still prove its long term value, from 2012 and 2016 the plant sat on standby at a cost of $1.8 million a day.

The paradox of technology and productivity

There is little doubt that growing information pressure, much of it enabled by technology, is distracting us from work that matters. And although none of us would like to see ourselves us unproductive we are clearly not spending out times as effectively as we could.

It would be easy to point to technology as being the cause of our productivity problems, but this is perhaps an overly simplistic view.

At a macro level there is a well established relationship between the use of technology and a *growth* in productivity (the US government pegs this as about 1-2% per annum). So although we are not being as productive as we could be, on average organisations, and the people inside them, are being more productive than ever before.

The paradox of technology and productivity is that technology is making us both more productive and less productive at the same time. We can work faster at a personal level but the increased productivity of others means that we have more information to get through, and subsequently more work to do.

This may be most noticeable amongst organisational leaders (where information channels converge) but the problem doesn't stop there. Information management practices at a leadership level have a knock on effect through the organisation (and even outside of it). When leaders are overwhelmed, the flow of relevant information stalls, decision making slows, meetings become more numerous and (somewhat ironically) the number of emails and information we share escalates. So although information overwhelm and its impact on productivity might be most acute at the top it has a compounding effect across the organisation.

It turns out that the things that drive personal productivity are not entirely personal.

The US government data cited earlier indicates that on average the benefits (just) outweigh the costs but there are undoubtedly organisations, departments, teams and individuals where this isn't the case. Though regardless of whether the outcome is currently a net positive or not, there is clearly a gap between the potential that technology offers and current use of it.
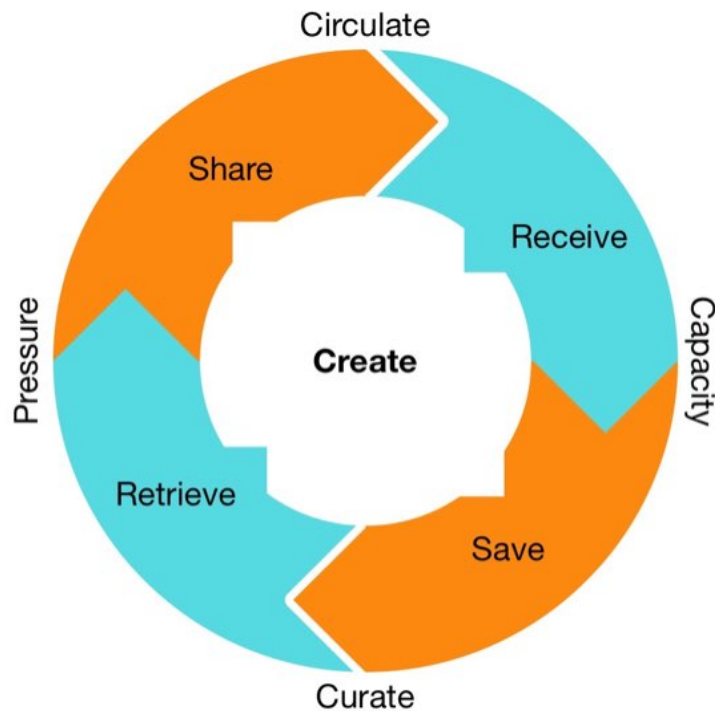
Information pressure and information capacity

We need a new approach to understanding productivity, one that starts from an organisational rather than a personal perspective. This is especially the case in information rich environments such as government, professional services and creative industries but it is also relevant to the administrative side of almost any organisation.

With the shift from a drought to a flood mindset, we need to move from thinking of information (and productivity) in terms of stores to thinking in terms of flow.

In the above diagram our common experience of information flow normally starts in the top left, when information is shared with us (often in the form of email but it could be in any number of formats including face to face, SMS, social media or good old fashioned post). When shared, information is pushed to someone else and with it, the burden of receiving and managing it.
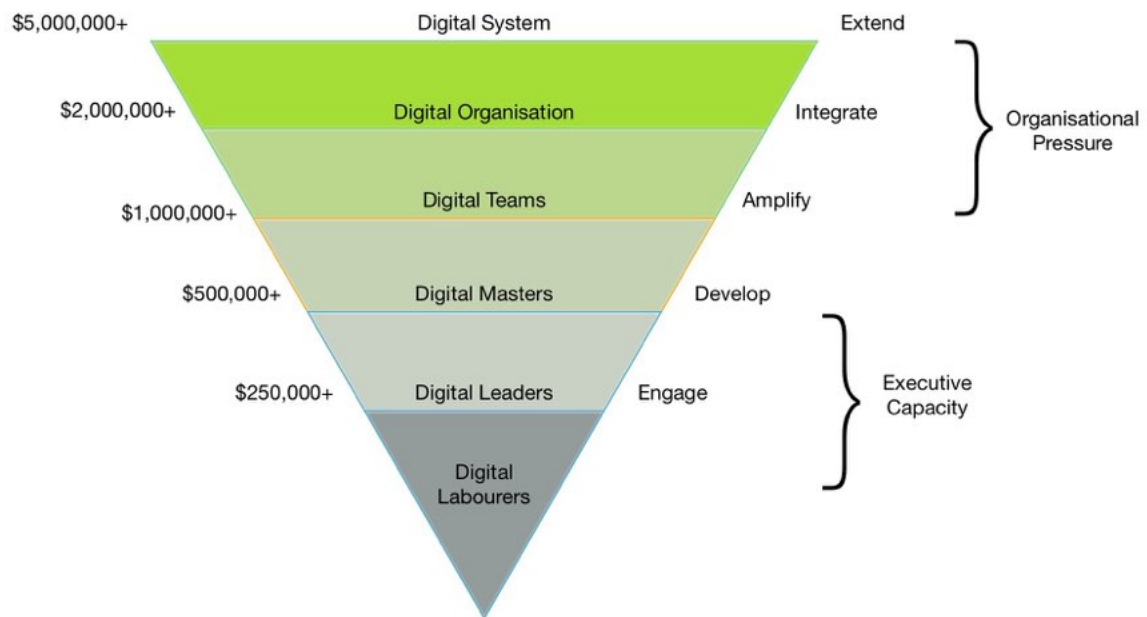
Each message received needs to then be assessed and a decision made to discard it, send it on to someone else, or save it for later use[4]. The information we save needs to be retrievable later on, because if we cannot retrieve it when we need it, the information is of little use.

The 'use' of information involves it subsequently being shared with others, either directly, or indirectly through its use in the creation of new information.

It is arguable that our ability to create, retrieve and share information is growing faster than our ability to manage it.[5] In effect information pressure is growing faster than our information capacity.

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[4] Of course when we don't know what information we will need later, and we don't know how else to find it easily, there is a tendency to hoard excessive amounts of it

[5] A simple example is that the creation of one email cc'd to 20 people burdens 20 people with receiving it.

$5,000,000+$	Digital System	Extend	
$2,000,000+$	Digital Organisation	Integrate	Organisational Pressure
$1,000,000+$	Digital Teams	Amplify	
$500,000+$	Digital Masters	Develop	
$250,000+$	Digital Leaders	Engage	Executive Capacity
	Digital Labourers		

The need for a digital first approach

One of the core challenges facing information intensive organisations is that while modern digital tools have resulted in a steady increase in information pressure,[6] our capacity to manage the information has changed far more slowly. People are largely using the same approach to managing information (whether it be doing email, taking meeting notes or marking up documents) as they were a decade a go. With the pressure going up and our capacity to deal with it remaining much the same, the thing to give is our time, and subsequently our productivity.

As pointed out earlier in the paradox of technology and productivity our digital tools offer a significant opportunity to improve productivity and reclaim some of this lost time. In fact a comprehensive approach to using digital technology, what I call a digital first approach, will not only improve individual capacity, but also will have the potential to dramatically reduce information pressure.

Our digital tools are fundamentally information tools (as in information technology) and a digital first approach is simply one in which we first look for the digital option when creating, curating and circulating information.

It is important to acknowledge a *digital first* approach is not *digital only*. There are legitimate situations where a digital approach is not the most effective and the upfront cost outweighs the long term benefit.[7] But with a digital first approach the choice to use 'analogue' tools should be made out of intention, not out of habit.

Delivering on a digital first approach requires that individuals are given training and support in the tools and techniques that facilitate it. In addition, any meaningful intervention will ultimately require a whole of organisation commitment (because our productivity is

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[6] Based on email volumes this is about 8% per annum, source: Email Statistics Report, 2013-2017 http://www.radicati.com/wp/wp-content/uploads/2013/04/Email-Statistics-Report-2013-2017-Executive-Summary.pdf

[7] An example of this might be a group brainstorming session using a whiteboard

as much a result of others actions as it is our own). Following is an outline of what a staged, whole of organisation approach looks like and the benefits that can be achieved.

Digital Leaders

That being said the time saving and other benefits associated with a digital first approach can be significant. Work with some of Melbourne's most progressive councils shows that training programs aimed at providing senior leaders (levels one to three) with digital first training resulted in productivity gains averaging 2-3 hours per week per participant. The combined value of this across the leadership team is in excess of $250,000 per annum[8] (on the model shown on the previous page this is the level of *Digital Leaders*).

Digital Masters

What this work also showed was that certain individuals (including those at a director level) achieved significantly higher benefits, some in excess of five hours per week. This would indicate that with the right support structures the potential productivity gains across the senior leadership team could be well in excess of $500,000 per year. This is the level of *Digital Masters*, and although the benefits are significant, it is largely limited to the senior leadership team.

Digital Teams

For overwhelmed organisational leaders a bump in personal productivity is perhaps the best way to see the potential of digital technology at a larger scale. It is at this point that the focus of training starts to shift from building capacity to reducing pressure. In fact once the senior leadership team has been exposed to a digital first approach it is likely that their greatest frustration will be that their direct reports haven't.

Work with these same councils shows that when the digital first training provided to the senior leadership team is rolled out to Level Four and Level Five the productivity gains continue to grow. Once again the benefits are also in the region of 2 hours per week per person, representing $1 million or more in annual productivity gains across the organisation. This is the level of *Digital Teams*.

Digital Organisations

Beyond *Digital Teams* there are still significant opportunities to grow productivity but at this point we need to acknowledge the structural issues with how we share information. In local government most internal communication happens over email, but it is arguable that this is no longer the most appropriate way for organisations to share information internally. Research by Microsoft and McKinsey shows that when enterprise social tools are effectively introduced as part of the information sharing solution productivity improvements of 25% or more are possible.

This may seem incredible but when we look at how much time is currently wasted in unproductive communication, meetings and unnecessary rework it is actually quite realistic.[9] Even If just 10% of this benefit could be realised the bottom line impact to medium sized organisations could well exceed $2 million per annum.

Digital Systems

The systemic impact that organisations have on their customers and other stakeholders (in the case of councils, this might include constituents, local businesses and suppliers) should not be ignored. Even a small improvement in information sharing could result in a benefit of $5 million per annum or more.

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[8] Based on a senior leadership team consisting of a CEO, five directors and 20 senior managers

[9] In fact recent research suggests that as much as 50% of work time is wasted in non value adding activities. Source: The Paradox of Workplace Productivity https://hbr.org/2016/04/the-paradox-of-workplace-productivity

Getting started with a digital first approach

Moving towards a digital first approach is as much (if not more) about people than it is about technology. Perhaps the biggest contributor to the current imbalance between information pressure and capacity is that people's knowledge and skills haven't kept up with the technology.

As a cultural change project it is important to invest appropriate time and energy to ensure people are on board. So before you start here are five things you might want to consider.

1. Take a staged approach

How do you eat an elephant? One bite at a time. A holistic approach to reducing information pressure is a big challenge with a big payoff. Taking a staged approach similar to what was outlined in the previous section will make this more manageable.

2. Start with the leadership team

Without explicit commitment at the top a digital first approach is bound to fail. In fact research shows a lack of leadership engagement is the number one cause of failure for information sharing projects.

3. Focus on the 'why' not the 'how'

Giving adequate time to discussing the 'why' and the 'what's in it for me' of a digital first approach allows people to buy in. This is particularly relevant to the leadership team who need to feel they have a choice as to whether they engage in the change process.

4. Maintain momentum

Once the leadership team's on board you will need to move onto the next stage as quickly as possible. Once the leadership team is committed their biggest frustration will be in other people not keeping up.

4. Provide adequate resourcing

A concerted effort to reducing information pressure will result in significant financial benefit. Make sure you can resource your project appropriately. You need to get it right the first time because a second time may never present itself.

Leading with Technology program

Simon runs programs for councils and other medium sized organisations that show organisational leaders a digital first approach in a practical, hands on way. To find out more about the program please get in touch via **hello@simonwaller.com.au** or **1300 66 55 85**.

"The digital leadership training was a great opportunity to recalibrate our corporate expectations of what technology can and should do for our organisation. It is clear that we have great opportunities to improve efficiency, support more well considered decision making, and engage with staff and community in a far more sophisticated manner. I have observed immediate benefits in my work practices as well as the practices of our leadership team in the organisation."

Nerina Di Lorenzo

Chief Executive Officer Moreland City Council

"We've been working with Simon on our Digital Leadership program at Brimbank. Simon's advice and guidance in the development and implementation of this program has been committed, flexible and professional.

Brimbank City Council has a massive change agenda this year, and to be able to tailor a program that meets the needs, and ties together, a number of complex and concurrent business transformation/change projects, has been critical. Simon dedicates the time to truly understand the business need up front, which results in a very effective program."

Melanie Fleer

Manager Governance at Brimbank City Council

"Simon recently delivered his Leading with Technology program at the City of Casey. Simon brought a unique skill set – a blend of business acumen, immense digital knowledge, personality and wit. And of course the content of the program was exemplary – so much so I'm confident our investment in Simon's program will pay off in a very short timeframe as we start applying the tools and techniques he gave us."

Chris O'Connor

Manager Digital Casey at City of Casey

"Leading with Technology was terrific in helping us think about our current use of technology and showing how it can make us more productive, as individuals and as a team, together with the implications of getting it wrong or the benefits of doing it right.

While time was spent on technology, the key discussion was about the challenge of being leaders in an environment where technology is evolving rapidly and radically changing our world, and how we proactively use it to our advantage"

James Scott

Director Corporate Services at Moreland City Council