

# Inside Knowledge



Incorporating *Enterprise Information* magazine



## Hitting the target

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Patti Anklam examines the ins and outs of network management.

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**THE KNOWLEDGE**

Sam Marshall reveals the key to making collaboration work.



We begin this paper with an assertion: discipline is not a dirty word! We also have a confession: we are avid Doctor Who fans, so TARDIS is a logical name for our knowledge-productivity system.

But what is knowledge productivity and what is TARDIS? In this article we will answer both questions. However, first we must provide some context. So that you can understand our particular notion of discipline, we must tell you a bit about our organisation: what we do, our business processes and our challenges. We will take you down the path of our knowledge productivity journey, but keep returning to the idea of discipline because it is central to the way we work.

The TARDIS project was initiated in November 2003 by Lieutenant General Hurley, who heads the Capability Development Executive of the Australian Defence Force (ADF). General Hurley is responsible for providing the Government of Australia with decision-making knowledge so it can make prudent and timely investments in the country's defence capabilities.

These capabilities involve a complex mix of elements, including people, organisations, equipment, operational processes and training. We guess you can already see parallels with the traditional knowledge management (KM) construct of people, process and technology...

General Hurley has 300 people in his organisation. They manage just over 200 projects and monitor a further 200 or so, valued in excess of AU\$50bn in total. That's more than US\$40bn. For something to be considered as a project the acquisition costs must exceed AU\$20m – anything less is considered minor. General Hurley's organisation also monitors capabilities throughout their lifecycle, because there will be one or more mid-life upgrade, of course, and government needs to know when



### Knowledge sharing

## Disciplined KM

The TARDIS holds the key to knowledge productivity at the Australian Defence Force – despite an unusually high rate of staff turnover.

By Graham Durant-Law, Patrick Byrne and Mark Blackburn

capabilities will degrade or become obsolete and plan accordingly.

Like the rest of the ADF, the composition of the Capability Development Executive is predominantly male. Four-fifths of staff are, predictably, military which entails its own set of strengths and weaknesses. For

example, incoming military staff are often unfamiliar with the bureaucratic environment and there can be occasional loyalty conflicts between the various services and group heads.

Indeed, there will always be a significant difference in the mental attitudes of soldiers cultivated for

military operations compared to the attitudes required to refine long-term policy, which has to be done through an array of ADF and other government agencies that may have dissimilar agendas and cultures.

Add to this the fact that most military officers have to learn some project management, systems

lengthen business processes seemingly arbitrarily. Accelerating the time for the development of requirements prior to acquisition is particularly problematic, as are changes in financial guidance.

However, our biggest challenge is a people challenge. Specifically, staff turnover. We have short-term tenures – secondments from the military

overseas for six months, take some post-operational leave, come back to us for six to nine months and then leave again for their next appointment.

Many organisations would struggle to function effectively for long with such a degree of corporate churn. Given that the business process from project conception through to second-pass approval by the Australian National Security Committee alone can take five or more years, it is not inconceivable for a project to have a complete turnover of staff three or more times in its lifecycle! This also includes the stakeholders. The effect of this is that any knowledge system must provide for an auditable trail of key decisions of events in a project's life, and efficient hand-over mechanisms. Again this takes discipline.

Now that you know a bit about the Capability Development Executive and you know that our problem of corporate amnesia is caused in large part by staff churn, we would like to outline our knowledge-productivity journey.

#### Enter the TARDIS

As mentioned before, TARDIS was initiated in 2003. At the time, TARDIS was an acronym for 'The ADF Requirements Development

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engineering and platform-acquisition skills on the job. All this means the risk of failure is substantial unless sound business processes are established, articulated and followed – which, of course, requires discipline!

#### Corporate amnesia

At the time, General Hurley was frustrated by the 'corporate amnesia' endemic in the Executive. Corporate amnesia is a common challenge in every organisation. However, all the pre-conditions for corporate amnesia were not only present in our workplace, but difficult for General Hurley to directly combat, too.

For example, the requirement to conform to the wider ADF information-technology environment and, in particular, security demands, means software applications deployed at the ADF often lag behind those readily available to other organisations.

This, in turn, has delayed the deployment of some potentially useful tools, such as Microsoft SharePoint to enable online collaboration, and a database-backed document-management system for version control. Security considerations also mean that data and information is sometimes compartmentalised and access restricted.

Additionally, General Hurley has to bear in mind the sometimes capricious influences of the political process, which can compress or

– combined with long government-mandated business processes of five years or more.

In 2003, for example, more than 45 per cent of our staff spent just 12 months or less in their job and 78 per cent of staff had been in their job for less than two years. In that year, more than one-third of staff had left the organisation by mid-October, not to be replaced until some time in the first quarter of 2004. It is the same story every year.

This means we have an annual turnover of staff of more than 40 per cent. Such a rate of turnover is compounded by the current ADF

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operational tempo, which sees many of our military-sourced members deployed overseas for six-month periods to Iraq, Afghanistan and the Sudan, as well as various peace-keeping missions around the world. In other words, staff are posted to us and work in the organisation for six months or so, are then deployed

Information System', but it has since evolved into something much bigger, more complicated and much more useful than just a simple information system.

In addition to drawing together all the critical information needed to make the organisation function more

Component 1: TARDIS Data and Document Management	TARDIS Data and Document Management provides the framework and mechanisms for managing all information artefacts generated by, or provided to, the Capability Development Executive, no matter what their form or type. It includes the ability for multi-dimensional display and management of data and information, in one or more databases. Currently, TARDIS uses Telelogic DOORS as the primary database and Microsoft Access for the management of some data. The intent is to move to Microsoft SQL Server, which is more scalable than Access, later in 2007. Objective Software underpins the document-management system.
Component 2: TARDIS Financials	TARDIS Financials provides the framework and mechanisms to manage and display financial data for projects, other initiatives and the general operations of Capability Development Executive. At the moment, TARDIS Financials consists of several Microsoft Excel spreadsheets, based on standardised workbooks. Increasingly, financial information is published to one of the TARDIS Web components.
Component 3: TARDIS Schedules	TARDIS Schedules provides the framework and mechanisms to manage and display all aspects of schedule data for projects, other initiatives and the general operations of the Capability Development Executive. Currently schedules are managed in Excel, Microsoft Project and Microsoft Outlook. Schedule information and calendars are published to one of the TARDIS Web components.
Component 4: TARDIS Web	TARDIS Web provides the framework and mechanisms to manage the Capability Development Executive's web presence on the Defence Secret Network, Defence Restricted Network and, of course, the Worldwide Web. It uses ComWeb as the corporate website-development tool. The theme, structure and some content are common across all networks. Wherever possible content is drawn from TARDIS Data and Document Management and updated seamlessly. Because of the problem of aggregation of unclassified data becoming classified the internet presence is managed separately.
Component 5: TARDIS Reports	TARDIS Reports provides for the generation of information in the format and type the stakeholder requires. Experience to date has shown that this component needs to be reactive as it is difficult to 'guess' what information is required by each executive or stakeholder. It is also evolutionary in nature as once a report framework is generated, the stakeholder may wish to modify it to further satisfy their evolving requirements. Currently, some reports are semi-automated from data maintained in TARDIS Data and Document Management and TARDIS Financials. Increasingly, reports are published to TARDIS Web.
Component 6: TARDIS Stakeholder Management	TARDIS Stakeholder Management is a framework to manage the multiplicity of stakeholders with whom the Capability Development Executive must engage as part of its core business. The stakeholders include upstream and downstream organisations that provide information to, or require information from, the Capability Development Executive. Peripheral organisations also use information from the Capability Development Executive for various purposes not directly related to capital procurement. Currently, most of the stakeholder-management function is done within the Telelogic DOORS database. Most projects are also publishing stakeholder information to one or more TARDIS Web components.
Component 7: TARDIS Business Process Support	TARDIS Business Process Support provides the framework and mechanisms wherever possible for all elements that provide support to business processes including the: <ul style="list-style-type: none"> <li>■ Governance of those processes;</li> <li>■ Manuals and procedures that explain those processes;</li> <li>■ Metrics collection to measure and improve those processes.</li> </ul> <p>To date most of the focus of TARDIS has been on the collection of metrics, and the publication of manuals and procedures to TARDIS Web.</p>
Component 8: TARDIS Training and Support	TARDIS Training and Support addresses the training framework for TARDIS and the support element, which is known as the TARDIS Help Desk. The TARDIS Help Desk provides the formal knowledge brokering capability and is the physical knowledge portal for the Capability Development Executive.

Table one: TARDIS components

efficiently – even with the frantic merry-go-round of staff movement – it also involved tightening processes and practices, and encouraging much greater knowledge sharing.

Indeed, it was obvious from the start that anything we put in place had to have a very big people-and-process component, too – something that was purely technological would fall flat on its face.

Accordingly we did not take a purely technical approach. Instead, we first focused on getting our processes right and taking our people on what we thought was a guided journey; a journey that, in reality, like the TARDIS in Doctor Who, has taken us to some unexpected places – and just occasionally to a few where we didn't want to go.

TARDIS is helping to tackle the effects of corporate amnesia by embedding knowledge-productivity principles – see Table one – into the Capability Development Executive as part of an ongoing and evolutionary KM strategy. It focuses on people and process solutions to operationalise business processes, rather than seeking the technological 'silver bullet'. In fact, we have a saying – "There is no silver bullet ... just bite the bullet and get on with it".

This is evident, in part, from three of the top-level requirements. The first required that 'no new software was to be used,' (apart from approved ADF-wide licences) and the second that 'no [software] coding was to be used beyond the application level'.

The third and last was the requirement that Capability Development Executive staff had to 'be able to use and manage the system themselves'. The effect of these requirements was to focus TARDIS on people and process solutions, and the system had to be as simple as possible. It also required that individuals had the discipline to learn and use the available tools, and the discipline to follow set processes.

So what is TARDIS? In its present form – and the form has changed several times – TARDIS consists of eight interlinked parts, which are developed and evolved as resources allow and priorities demand. Each part is outlined in Table one. What should be immediately obvious is that TARDIS is not a 'thing' or a single system. Rather, it is a system of systems that uses knowledge-productivity principles as the guiding framework for corporate activities.

From the outset, the primary focus of TARDIS has been on the knowledge workers – the staff – rather than

or 'very unsatisfied'. This compares favourably to the 2003 results where 12 per cent of respondents reported satisfaction levels ranging from satisfied to very satisfied with 28 per cent of the respondents reported they were unsatisfied or very unsatisfied.

Of particular interest is the fact that we have increased the number of 'satisfied individuals' by compressing the number of 'somewhat satisfied' individuals. It is also interesting to note that we have slightly increased the number of 'very dissatisfied' individuals and slightly decreased the number of 'very satisfied' individuals. We think

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executives. Accordingly, they might be seen as the primary 'customers' of TARDIS. The staff and their immediate supervisors are generally optimistic about the potential of TARDIS, while recognising that its full potential is yet to be realised. One of the unforeseen spin-offs, identified through feedback and periodic reviews, is that some staff now feel they have greater ownership and/or control of their projects. Indeed, they are now holding external agencies to account and are demanding greater information fidelity of supporting organisations.

Figure one shows the state of satisfaction in 2003 compared to 2006. A clear improvement is evident, although there is still a long way to go.

Overall satisfaction levels with TARDIS are generally high, with 50 per cent of respondents reporting satisfaction levels ranging from satisfied to very satisfied, while 21 per cent of respondents say they are 'unsatisfied'

this has occurred because of rising expectations, but overall we are happy that we are moving forward, noting that the survey in 2006 probably included fewer than one-fifth of the people surveyed in 2003 due to staff turnover.

More interestingly, if you look at the graph of component satisfaction, you will see that the people solutions – Meeting Support and Help Desk – are the most popular components of TARDIS. The resounding winner is Help Desk, with no one reporting any form of dissatisfaction!

We embedded a six-person helpdesk into the Capability Development Executive. This does everything ranging from meeting support, to coaching staff on the best use of the available software tools, or simply connecting individuals with each other. The helpdesk, to some degree, has become part of our corporate memory, but more importantly it provides a people face to our largely process solution.

Individual and collective discipline is required to follow organisational process to achieve business objectives.
The organisation's outputs drive data and information production and management, including its storage.
Data and information are created once and used many times.
Data and information exist in one location, wherever possible and practical.
An open data and information architecture is used to facilitate collaborative work.
A cradle to grave approach is employed for data and information for every project and initiative.
There are multiple access paths to data and information.
Data and information management, production processes, and tools are standardised wherever possible and practical.
Data and information matures over time.
Data has a visible quality attribute (meta-data).
All data and information is owned by the organisation, rather than the individual.

Table two: Knowledge productivity principles

One of the more popular features of the helpdesk is that it actually does help and is not just a bureaucratic black hole for requests. There is no formal way of engaging the helpdesk. Staff can ring, e-mail, pop round or fill in a web-based form. The helpdesk goes to the staff. It has about 120 planned tasks at any one time and receives and generally addresses between five and 40 *ad hoc* tasks every single day.

### Discipline

Our major lesson is the need for discipline. We think that this is the missing component in the corporate literature on KM and, for that matter, broader management literature. It seems that as a society we are afraid of

discipline because it conjures up images of corporal punishment. Yet we would say to you that 'discipline is not a dirty word'.

Indeed, in 1918 one of Australia's most famous generals – Sir John Monash – who was famed for his organisational abilities and the loyalty of his soldiers, captured the meaning of discipline very well. He said: "Discipline is, after all, only a means to an end, and that end is the power to secure coordinated action among a large number of individuals for the achievement of a definite purpose."

For the Capability Development Executive, discipline is the means by which we do things at the right time, in the right place, to the right quality, using the right processes. There are

at least five types of discipline, all of which are essential if a KM initiative is to succeed.

Discipline is not about punishing people, but rather about engendering the right culture and skills so that things

necessary. Fortunately in our situation this is a very rare requirement.

Following standard processes is a discipline, and requires discipline. It enables freedom of movement and decision, knowing the base is solid. It requires individual discipline and commitment to follow a process that one may not completely agree with, or to use corporately-supplied tools that may not be intuitive to them. It is an individual discipline to think about the corporate need and share knowledge in the first place.

Discipline does not mean that people are not free to criticise or to do things as they see fit – the right to criticise is one of the foundations of improvement. However, when deviation from the norm occurs then reasons and approval should be provided, always remembering the paradigm that it is easier to ask for forgiveness than permission. That said, when acting outside the norm one must do so with skill and a complete understanding of why it is necessary to do things differently. To do otherwise is a mark of a lack of discipline.

Discipline does not require a hands-on approach by managers and leaders, but it does require that managers and leaders remain connected. Discipline starts at the top. It is a given that executives must maintain discipline in their own actions. Only then can they expect discipline from their staff. In this case it is a matter of 'doing as we do'.

In short, our KM journey has been largely successful because our

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are done at the right time, in the right place, to the right quality and using the right processes – all with limited assistance. That said we should not be afraid of holding people to account, and to discipline them appropriately if

people have usually exercised individual discipline. We have group and cultural discipline that works to a common cause – to supply our sailors, soldiers and airmen with the best possible solutions so that they can do their job knowing

we did our best within government constraints. It helps a lot when you know you could be jumping out of the aeroplane using the parachute you recommended for purchase.

Our KM journey has been successful because we have process discipline. Sometimes, this has to be rigid to meet government-mandated requirements. At other times it is less rigid. We also have technology discipline. We do not constantly seek the technological silver bullet. That is not to say that we will not consider the very latest software – we do and if we think we need it we build a compelling business case and seek a corporate licence, so that all of the ADF can benefit from it. In fact we are proud to say that the Capability Development

Executive has led the charge for a number of ADF-wide software acquisitions, but generally we work with what we have.

It is also an ongoing and evolutionary process. We are learning all the time and strive to continually learn. At times we take three steps forward and two steps backwards. Every year we have to train, and sometimes retrain, our staff because of our high-rate of corporate churn. It takes discipline to stay on track.

#### A means to an end

It is worth revisiting Sir John Monash's words on discipline: "It is, after all, only a means to an end, and that end is the power to secure coordinated action among a large number of

individuals for the achievement of a definite purpose."

If we change a couple of words we have a pretty good working description of the intent of knowledge productivity: "Knowledge productivity is, after all, only a means to an end, and that end is the means to secure coordinated action among a large number of individuals for the achievement of a definite purpose."

This is what knowledge productivity is all about – getting an organisation to achieve a definite purpose by building on the strength and knowledge of the people in the organisation.

We believe knowledge management is a continuous learning experience. Because it is continuous it is a change-management journey and has all the challenges that a change management initiative brings. This means you should often move forward in small bounds and consolidate on wins as they occur – sometimes these wins will take time. Allow time for consolidation so that the changes become the normal way of doing business and then move forward. Initially work with what you have – people generally don't like change and are largely habitual. Make process a habitual discipline and remember, discipline is required at every step. ■

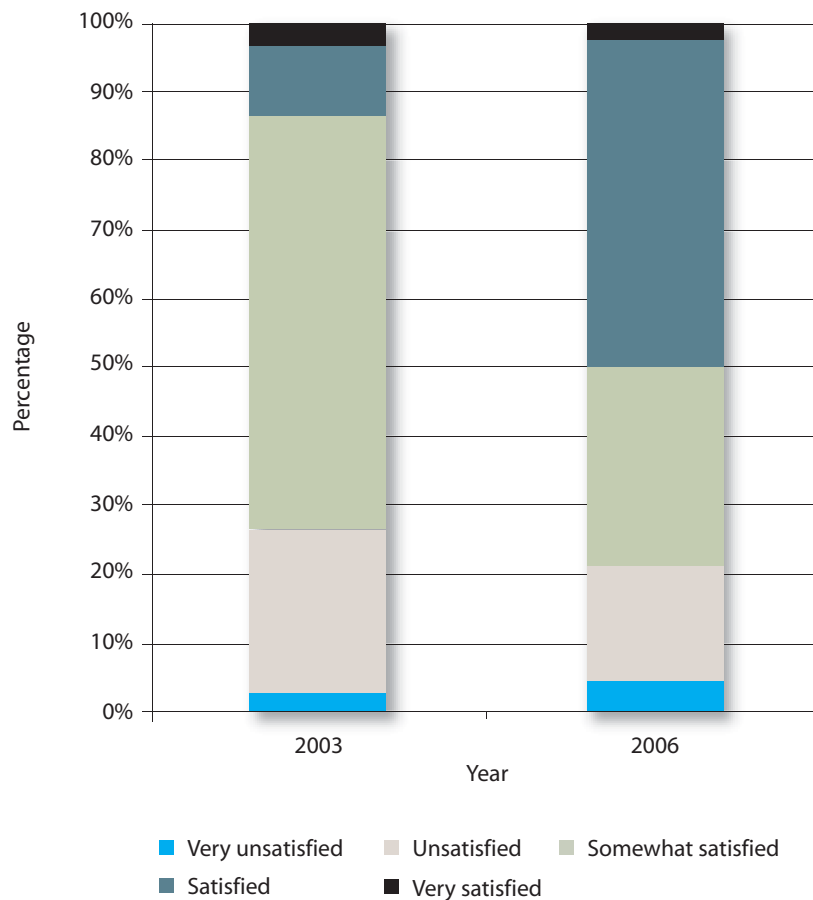


Figure one: Satisfaction rates 2003 and 2006

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