TARDIS: A Journey Through an Enterprise Knowledge Space

An Australian Case Study in Applied Knowledge Management

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TARDIS: A Journey Through an Enterprise Knowledge Space

Research Aim, Methodology and Questions

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Research Aim

- To critically describe the design and implementation of TARDIS within CSD.

Methodology

- Lebenswelt (‘lived experience’) case study.
Research Questions

• What is the business case for CSD to introduce a knowledge management system?

• Is CSD just seeking a silver bullet solution to a complex management problem?

• Is the Knowledge Productivity Model (KPM™) a useful construct for building a knowledge management system?
• Is the Holistic™ Systems Development Model (HSDM) a useful construct for building a knowledge management system?

• How does TARDIS fit into the HSDM?

• How does the TARDIS fit into recognised knowledge management models?
Research Questions (continued)

• How does the design of TARDIS differ from conventional information and knowledge management approaches?

• Is the design of TARDIS a model that can be transferred to other situations?

• Is the people and process approach over a technological solution self-limiting?

• What were the essential success factors for TARDIS and can these be generalised to other situations?

• What were the challenges faced by TARDIS and are these common to other knowledge management initiatives?
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A Review of the Literature:
Four Knowledge Management Models

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McDonald, C 2003, Knowledge management systems: theoretical background, Canberra.
Some KM strategies focus on knowledge making (demand-side) while others focus on knowledge sharing (supply-side).

Focusing on knowledge processes and related social conventions, e.g. individual learning and communities of practice policies and programs, is also important.


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The HolisTech® Pty Ltd Approach

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The Knowledge Conduit

Predictive Domain
‘know how & why’

Explicit Knowledge

Experience + I + Understanding = Tacit Knowledge

Codification + =

Data

Raw facts =

Context + = Information

Enrichment

Osmosis

Diffusion

Descriptive Domain
‘know what & how’
Knowledge

Time

Rising Knowledge Helix

Horizontal Knowledge Helix

Falling Knowledge Helix

Tacit Knowledge

Explicit Knowledge

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Most businesses spend most of their time in these sectors.

The objective is to compress the urgent dimension and shift the axis.

Inefficient businesses spend most of their time in these sectors.

The diagram shows the actual business state and the desired business state. Most businesses are in Sector 1 (important and easy) and Sector 2 (important and difficult), while the desired state has more time spent in Sector 3 (not important and easy) and Sector 4 (not important and difficult).
Knowledge Productivity

Creating the Environment

Knowledge Model

Hard KM

Defines the interrelationships in

Provides the framework and defines the outcomes for

Knowledge Productivity

Soft KM

Defines the techniques to be used for

Creates and encourages

Knowledge Productivity Manufacturing Process

Knowledge Productivity Enabling Environment

Architectural Framework for Knowledge Productivity Specific to a Context or Organisation

Knowledge Productivity Enabling Environment

Knowledge Productivity Manufacturing Process
6.5.3 Global brand competition.
6.5.4 Acme PL buying competitors.
6.5.5 Demand for quality.
6.5.6 Wages increasing.

1.2 Gain 30% market share.
1.3 Achieve brand recognition.
1.4 Presence in USA.
1.5 > 1% defect rate.

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What is the business case for CSD to introduce a knowledge management system?

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Capability Systems Division coordinates and manages capability change through change vehicles called projects.

The core product Capability Systems Division manufactures is information on current and future capability requirements and the FIC element changes required to transition between the two.
Capability Development Process 2004
Specific Capability Project Timelines
(Project Already in DCP)

First Pass Process
Commenced Options begin development at -4 yrs 8 mths

First Pass Options Approved by Troika (CCDG, HCS, FASCIR) no later than -3 yrs 11 mths before.

First Pass Documentation to DCC Secretariat at -2 yrs 10 mths

First Pass Approval by DCC at -2 yrs 9 mths

RFT/RFP development starts at -2 yrs 3 mths

Tender Assessment Completed at -8 mths 2 wks

Tenders Close at -11 mths 3 wks

Second Pass Approval by DCC at -5 mths 1 wk

RFT/RFP Released at -1 yr 4 mths

Develop Second Pass Sponsors Paper:
A. Latest Op Concept Document
B. Functional Performance Statement
C. Project Management Plan
D. Testing and Evaluation Concept
For each option write ABC

Develop Second Pass Project Management Plan
Develop PDF Request
Develop Acquisition Agreement
Start POCD development

First Pass
Initial Business Case Approved by NSC -2 yrs 4 mths

For each approved option write/refine:
A. Op Concept Document
B. Functional Perf Statement
C. Preliminary Test and Evaluation Concept
Then develop RFT/RFP

Develop First Pass Sponsors Paper:
A. Preliminary Op Concept Document
B. Project Management Plan
C. For each option write IBC

First Pass Documentation Start Multiple Sign-Offs at -2 yrs 11 mths

First Pass Documentation to CDB at -3 yrs

Second Pass Documentation to CDB at -8 mths

Second Pass Documentation Start Multiple Sign-Offs at -7 mths 2 wks

Second Pass Documentation to DCC Secretariat at -6 mths 2 wks

Second Pass Documentation to DCC Secretariat at -5 mths 1 wk

First Pass Documentation to DCC Secretariat at -2 yrs 10 mths

First Pass Approval by NSC -2 yrs 9 mths

First Pass Initial Business Case Approved by NSC -2 yrs 4 mths

For each approved option write/refine:
A. Op Concept Document
B. Functional Perf Statement
C. Preliminary Test and Evaluation Concept
Then develop RFT/RFP

-4 yrs 9 mths

-4 yrs

-3 yrs

-2.5 yrs

-1.5 yrs

-1 yr

-0.5 yr

0

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Problems

- 46% of the staff had spent less than 12 months in their job, and only 22% had been in their job for more than 24 months.

- There is a 50% turnover of staff per annum.

- About 45% of CSD staff believe they are employed on non-core tasks between 11% and 50% of their time.
Problems (continued)

- More than 85% of CSD staff rate the management of information within CSD as fair or worse than fair.

- 81% of the staff did not have a comprehensive audit trail of the decisions in their project.

- Inconsistent management processes from project to project, and branch to branch were evident.
Performance data/information relates to objectives, tasks/functions, constraints, solutions, and many miscellaneous issues. It includes the inter-relationships between all these areas.

Schedule data/information relates to the “timings” for delivering solutions that perform tasks against objectives.

Cost data/information relates to the “cost” of delivering solutions that perform tasks against objectives.

Performance
Schedule
Cost
Projects
Capabilities

From Desk Officer to Executive Level
TARDIS Components

• TARDIS Database
• TARDIS Electronic Files
• TARDIS Financials
• TARDIS Hard Copy
• TARDIS Interfaces

• TARDIS Process and Training
• TARDIS Reports
• TARDIS Schedules
• TARDIS Web
• TARDIS Working Groups
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TARDIS and Knowledge Management Models

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The Hierarchy to Wisdom

Wisdom
- ... to make competent decisions.

Understanding
- ... that assists in the getting of ...

Knowledge
- ... to get an ...

Information
- ... that provides the ...

Data
- ... to turn it into ...

Gather

People

Software

Tools

Story

Writing

Structured

Data

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## A Horizontal View

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<thead>
<tr>
<th>Know Why</th>
<th>Know What</th>
<th>Know Where</th>
<th>Know When</th>
<th>Know How</th>
<th>Know How Much</th>
<th>Know Who</th>
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<td>Desk Officers</td>
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## A Vertical View

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<th>Know Why</th>
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<th>Know How</th>
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</tr>
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These workbooks roll up to this workbook

These workbooks roll up to this workbook

Standard workbook names in a known directory

Contents of 'A. DGAD Projects'

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E-mail from Executive sent to Desk Officer with Committee Decision/Outcome Attached

Identifies Document Electronic Location

Identifies Document Hard Copy Location

E-Mail with Attachment

Detach Document Place in T-EF

Print and Place in T-HC

Record Decision in T-D PD

Record Document in T-D PIL

Identifies Document Associated With Decision Recorded In

T-D Project Diary

T-D PIL

T-EF

T-HC

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Future Research

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Future Research

- Need to develop some knowledge management models, as opposed to models of knowledge.

- Case studies that provide complete real world examples that firstly illustrate the ‘knowledge process’ from end to end, and then explain, rather than describe, how it actually works.

- Research that documents what knowledge actually means for public and private sector organisations would be extremely valuable, particularly if it leads to an accepted lexicon.
Some Recommendations

• Need a unit, or units, in the Master of Knowledge Management Course that teaches knowledge models and knowledge management models. A foundation in this unit would be epistemology.

• The discipline of records management is a dying art in the electronic age that desperately needs reviving. Courses in this area should be accorded a priority.

• Should consider forming a Centre for Knowledge Productivity.
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Conclusions

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'Make a round of the troops immediately after a battle, or even the day after, but before the reports have been drawn up, and ask any of the soldiers and senior officers how the affair went. You will be told what all these men experienced and saw, and you will form a majestic, complex, infinitely varied, depressing and indistinct impression; and from no one – least of all the Commander in Chief – will you learn what the whole affair was like.'

Leo Tolstoy – Writer

‘If you dissemble sometimes your knowledge of that you are thought to know, you shall be thought, another time, to know that you know not.

Francis Bacon – English Philosopher
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Epilogue

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• My work colleagues Ms Denise McQuire and Ms Shelley Thompson.

• LTGEN Dave Hurley and LTCOL Ciril Karo.

• Dr Trish Byrne.

• My supervisor, mentor and friend Mr Tony Eccleston.

• The student body of the MKM course.

• My wife Peta.
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Questions

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