Zombie Knowledge: Repurposing and Revitalizing Outdated Knowledge

Patrick Lambe, Straits Knowledge

ISKO Singapore March 2023
1. What is Zombie Knowledge, and why is it dangerous?
2. What makes a Capability?
3. Crossing the Transformation Chasm
4. A Tale of Two Companies: Transforming Zombie Knowledge
5. What can WE do?
Zombie Knowledge. It's knowledge that has lived out its life, died, and is now part of the undead. It needs bailouts from decision makers in order to operate, so it steals from the resources of living and useful knowledge to keep dead knowledge walking.

Patrick Ready, SIKM Forum 26 May 2022

This is a huge vulnerability for “best practices” and institutional knowledge in general – which in practice, is typically stored in the form of (inherently static) information. Knowledge – instead of being a buffer against environmental change, as it should be -- then becomes a self-contained meta-reality that no longer accurately represents “real” reality. [It] can be a drag on forward progress! To wit, “We already know this, so there’s no need to re-assess the situation – we’ll just plug and play our canned solution.”

Tim Wood Powell, SIKM Forum 13 January 2022

Values, skills, managerial systems, and technical systems that served the company well in the past and may still be wholly appropriate for some projects or parts of projects, are experienced by others as core rigidities-inappropriate sets of knowledge. Core rigidities are the flip side of core capabilities. They are not neutral; these deeply embedded knowledge sets actively create problems.

• 1985: Grolier CD (text-only)
• 1985: turns down Microsoft
• 1989: Compton’s Encyclopedia (mm)
• 1990: $650m revenue, sales peak
• 1991: starts making loss
• 1993: Advanced Technology Group
• 1993: cash crunch, Encarta
• 1994: Britannica Online & CD
  $450m revenue
• 1995: Sales force cut by 90%
• 1996: Safra buys at $135m
• 1997: CD at $125, $325m revenue
• 1998: 25,000 sets, no sales force
• 1999: Stops printing, portal free
• 2000: CD at $50, starts printing

Capabilities

Components  Configured  Routinized
Components  Configured  Routinized

“The entire choreography was done impervious to the naked eye... One wrong turn or second of inattentiveness by any of the actors involved, and a hundred things could kill any of them in a hundred really ugly ways. A small city grew like a weed in front of our mission-focused eyes.”

Pete Blaber, *The mission, the men, and me: lessons from a former Delta Force commander* (New York: Berkley, 2008).

Capabilities
Components

Knowledge in people
Knowledge in teams

Configured

Architected, Directed or Broken

Operational

Tools, Assets, Infrastructure, Routines
Knowledge resources
Knowledge processes

Routinized

“Civilization advances by extending the number of important operations which we can perform without thinking about them.”

Alfred North Whitehead An introduction to mathematics (1911).
The transformation challenge is about how to “cross the transformation chasm” and acquire new capabilities fast enough to overcome the decline in efficacy of old capabilities.

*Geoffrey Moore, Crossing the Chasm (1991)*

**Crossing the Transformation Chasm**

**Old capabilities**

**New capabilities**

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• Scenario 1: “Structural rigidities” – old capabilities delay the acquisition and growth of new capabilities

• Scenario 2: “Softer landing, faster takeoff” – old capabilities are repurposed to support new goals, acquisition of new capabilities is accelerated
KODAK VS. FUJIFILM

Case Study

Kodak vs. Fujifilm

- Very high sunk investment in facilities, expertise, R&D in film formation, chemistry of colloids, quality control
- High cost to develop capabilities – need to extract returns
- Kodak and Fujifilm dominated the market – safe, “harvesting” a consumer market

<table>
<thead>
<tr>
<th></th>
<th>Film</th>
<th>Digital</th>
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<tbody>
<tr>
<td>Barriers to entry</td>
<td>High</td>
<td>Low</td>
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<tr>
<td>Level of competition</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Expertise needed</td>
<td>Specialized</td>
<td>Generalized</td>
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<td>Profit Margins</td>
<td>High</td>
<td>Low</td>
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<td>Speed of innovation</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Marketing</td>
<td>Routinized</td>
<td>Adaptive</td>
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Divest zombie knowledge? Acquire new knowledge? Without bleeding cash?

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“Precision manufacture of thin, photosensitive films”

Technology (knowledge) audit & knowledge capitalization (novel configurations of existing knowledge):

- pharmaceuticals (expertise in functional molecules and grain formation applied to radiopharmaceuticals)
- cosmetics (expertise in collagen behaviors, preserving sheen and elasticity, and slowing oxidation in film, as applied to human skin)
- LCD screens (expertise in precision manufacture of thin, flexible film for photosensitive panels for screens in TVs, phones and personal computing devices).
Knowledge audits and specifically knowledge maps can improve visibility into the knowledge components that make up a capability.

Strategic

Capacity 1: We compete on the ability to...

Capacity 2: We compete on the ability to...

Capacity 3: We compete on the ability to...

Operational

Workgroup 1

Workgroup 2

Workgroup 3

Workgroup 4

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**Signals**
- Competitive/ transformation pressures from the environment are intense
- New capabilities are radically different – change not evolve
- Innovation and change are especially difficult to operationalize
- Training doesn’t seem to help
- Reorganizations are frequent but don’t seem to help

**Actions**
- Map your core capabilities (now and needed) – including the underpinning components and configurations e.g. knowledge maps and Wardley Maps
- Identify the rigidities and isolate them – and/or insulate the new capabilities
- Identify and capitalize through reconfiguration the components that still have value
- Invest in learning curves!
- *Caution: not all old capabilities are zombies!*

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Wardley Maps: https://medium.com/wardleymaps
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