

ENGG4061
Innovation and Entrepreneurship

*Managing
Knowledge and IP*

Types of Knowledge

- Data/information/knowledge/wisdom
- Explicit/tacit = codified/uncodified
- - Embrained (conceptual/cognitive)
 - Embodied (learning by doing - partly explicit, context-specific)
 - Encultured (shared meaning)
 - Embedded (resides in routines and processes)
 - Encoded (explicit)

Collective
endeavour

Embedded
knowledge
e.g. factory

Encultured
knowledge
e.g. project-based
firms

Organizational
context

Key
individuals

Embodied
knowledge
e.g. hospital

Embrained
knowledge
e.g. software
consultancy

Task environment

Routine

Novel

Knowledge Management

- Knowledge generation
- Knowledge identification
- Knowledge location
- Knowledge purchase
- Knowledge storage
- Knowledge diffusion

Organisational Knowledge

- Intangible - off balance sheet assets eg IP etc
- Positional – experience (know-how'), networks ('know-who')
- Functional – individual and team skills
- Cultural – how we do things around here, traditions of quality, service

- *Converting data and information to knowledge* – for example, identifying patterns and associations in databases.
- *Converting text to knowledge* – through synthesis, comparison and analysis.
- *Converting individual to group knowledge* – sharing knowledge requires a supportive culture, appropriate incentives and technologies.
- *Connecting people to knowledge* – for example, through seminars, workshops or software agents.
- *Connecting knowledge to people* – pushing relevant information and knowledge through intranets, agent systems.
- *Connecting people to people* – creating expert and interest directories and networks, mapping who knows what and who knows who.
- *Connecting knowledge to knowledge* – identifying and encouraging the interaction of different knowledge domains; for example, through common projects.

Knowledge Management Strategies

- Ripple – gradual diffusion from a centre
- Flow – handing project from one knowledge centre to another
- Embedding – bring knowledge centres into a broader framework
- Bridge – merging knowledge centres
- Transfer – taking knowledge from one domain and adapting for use in another

Overtaken

CORE
INNOVATION
CONCEPTS

Reinforced

ZONE 2

– modular
innovation

ZONE 3

– discontinuous
innovation

ZONE 1

– incremental
innovation

ZONE 4

– architectural
innovation

Unchanged

Changed

LINKS BETWEEN KNOWLEDGE ELEMENTS

Knowledge management for innovation

Phases in the innovation process

Discovery

Realization

Nurture

Generic routines

Search Capture Articulate

Contextualize Apply

Evaluate Support Re-innovate

Idiosyncratic knowledge management activities