



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

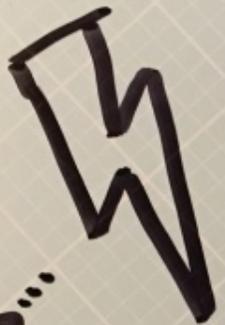
CREATE CHANGE

Innovation and HROs

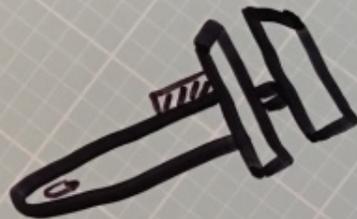
Tim Kastle, Associate Professor of Innovation Management

The University of Queensland Business School

New
Ideas...



...made
real...



...to unlock value.



Adapt to win

How Australian oil and gas companies
improve productivity in challenging times

*This report is produced by EY in
collaboration with UQ Business School*

April 2014



Innovators in our study demonstrated how innovation can occur in many areas. The examples provided are grouped into six types of innovation.

Types of Innovation	Examples from surveyed firms
Product	<ul style="list-style-type: none"> ▶ More efficient down hole pumps ▶ Drilling and completions technology ▶ Environmentally safe oil change technology ▶ Vehicle wash down water recycling system ▶ Vapour Recovery Units (VRUs)
Process	<ul style="list-style-type: none"> ▶ Floating Liquefied Natural Gas (FLNG) ▶ Flux-core welding for cryogenic tanks ▶ Seismic acquisition and processing ▶ New pipeline installation methods
Supply chain logistics	<ul style="list-style-type: none"> ▶ Modularisation of LNG construction ▶ Design for Manufacture and Assembly (DFMA) ▶ Advanced supply chain analytics for integrated logistics support
Service	<ul style="list-style-type: none"> ▶ Rapid land rehabilitation ▶ Cloud based engineering drawing management
Service distribution	<ul style="list-style-type: none"> ▶ Land owners trained as field service providers ▶ Remote monitoring and optimisation of well production
Management	<ul style="list-style-type: none"> ▶ Training software/learning modules ▶ Human Resource (HR) development ▶ Improved business processes

Three Levels of Scale:

1. New to the Firm
2. New to the Industry
3. New to the World

Another way to slice it:

Incremental

Disruptive, or radical

Figure 2: Factors cited as barriers to business success

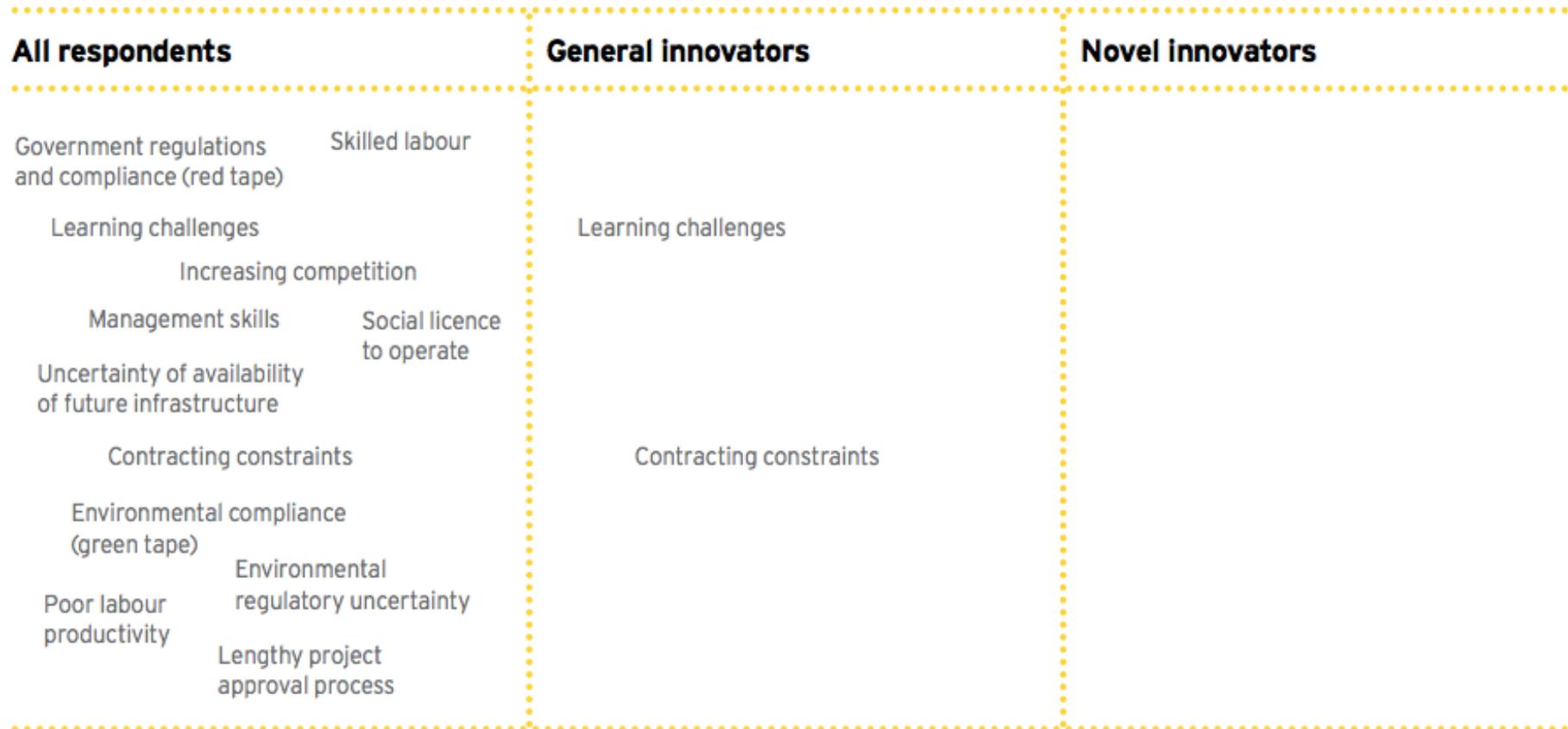
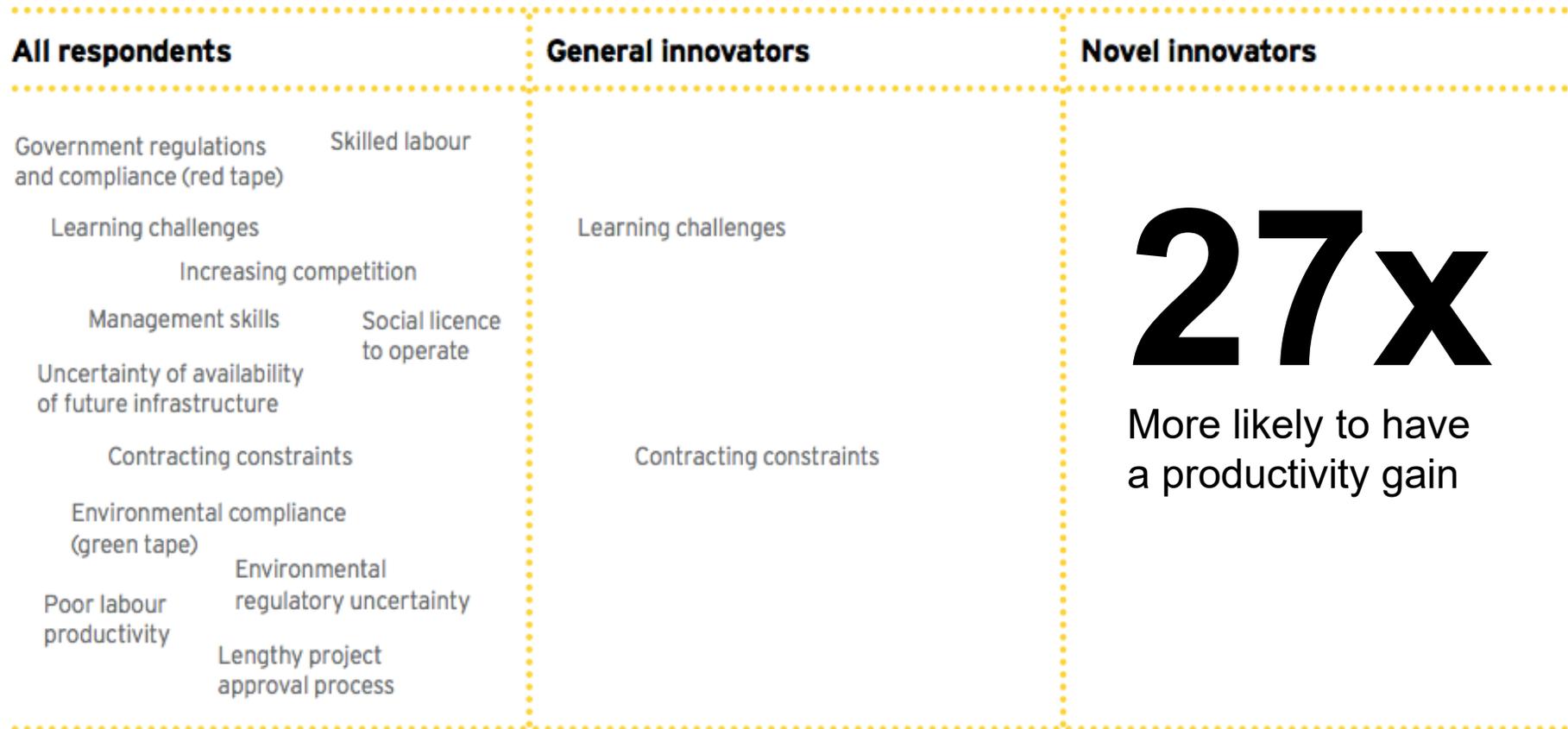


Figure 2: Factors cited as barriers to business success



Weick and Sutcliffe's Five Principles

Track small failures

Avoid oversimplification

Remain sensitive to operations

Maintain capabilities of resilience

Take advantage of shifting expertise

There is a tension in this list

Maintain capabilities of resilience

Two different ways to support resilience

Maintain capabilities of resilience

Track small failures

Remain sensitive to operations

Variance Reducing

Avoid oversimplification

Take advantage of shifting expertise

Variance Enhancing

Three frames to consider:

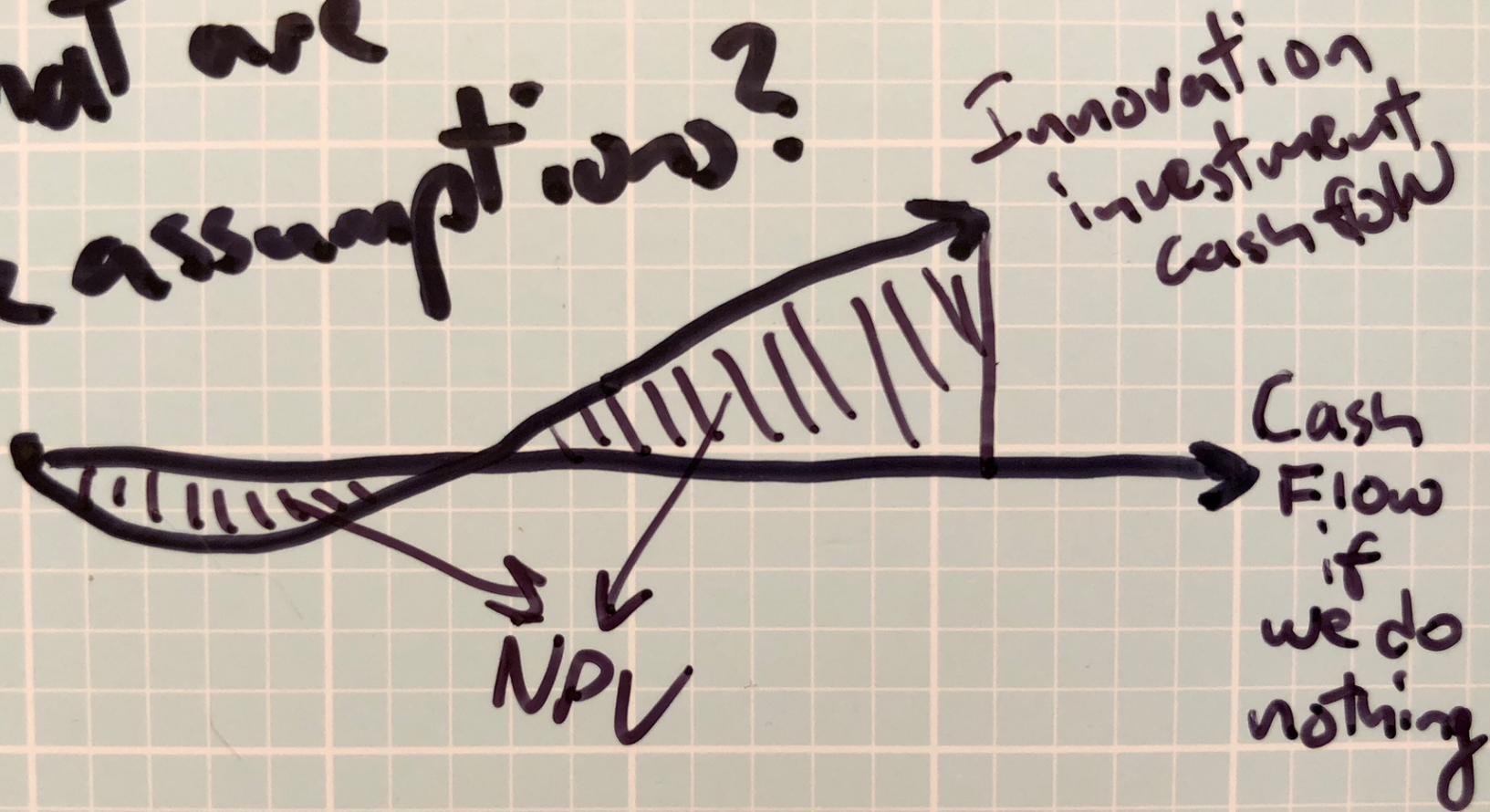
1. Benefits of an Innovative Mindset
2. Think Differently About Risk
3. Leadership and Innovation

The Benefits of an Innovative Mindset

Figure 2: Factors cited as barriers to business success



What are
the assumptions?



what if the
baseline is wrong?



NPV

what often
happens if
we do nothing

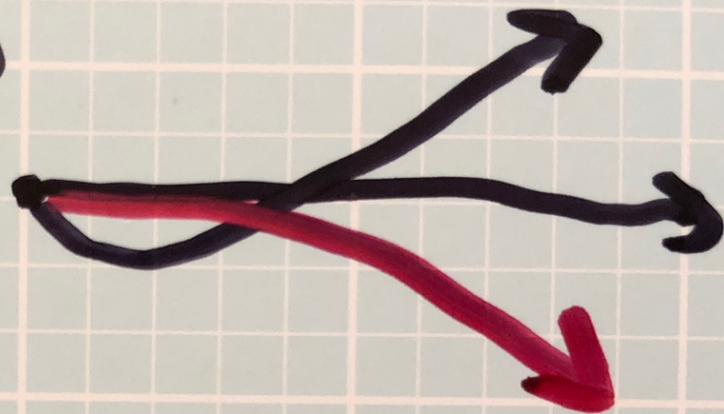
If this  is true,

reducing

short-term risk

INCREASES

long-term risk



Why was it so hard to copy Toyota?

“Why has it been so difficult for other automobile manufacturers to copy the Toyota Production System (TPS), even though the details have been described in books and Toyota actually gives tours of its manufacturing facilities? Because “the TPS techniques that visitors see on their tours—the kanban cards, andon cords, and quality circles—represent the surface of TPS but not its soul.” The Toyota Production System is about philosophy and perspective, about such things as people, processes, quality, and continuous improvement. It is not just a set of techniques or practices: On the surface, TPS appears simple.... Mike DaPrile, who runs Toyota’s assembly facilities in Kentucky, describes it as having three levels: techniques, systems, and philosophy. Says he: Many plants have put in an andon cord that you pull to stop the assembly line if there is a problem. A 5-year-old can pull the cord. But it takes a lot of effort to drive the right philosophies down to the plant floor.”

Source: The Knowing-Doing Gap by Jeffrey Pfeffer and Bob Sutton

Innovation Depends on Strategy

High Innovation	0.84	1.20	1.37
Some Innovation	1.14	1.12	1.25
No Innovation	1.10	1.09	1.23
	Low Cost	Customer Intimacy	Best Product
	No Point of Difference	1.0	

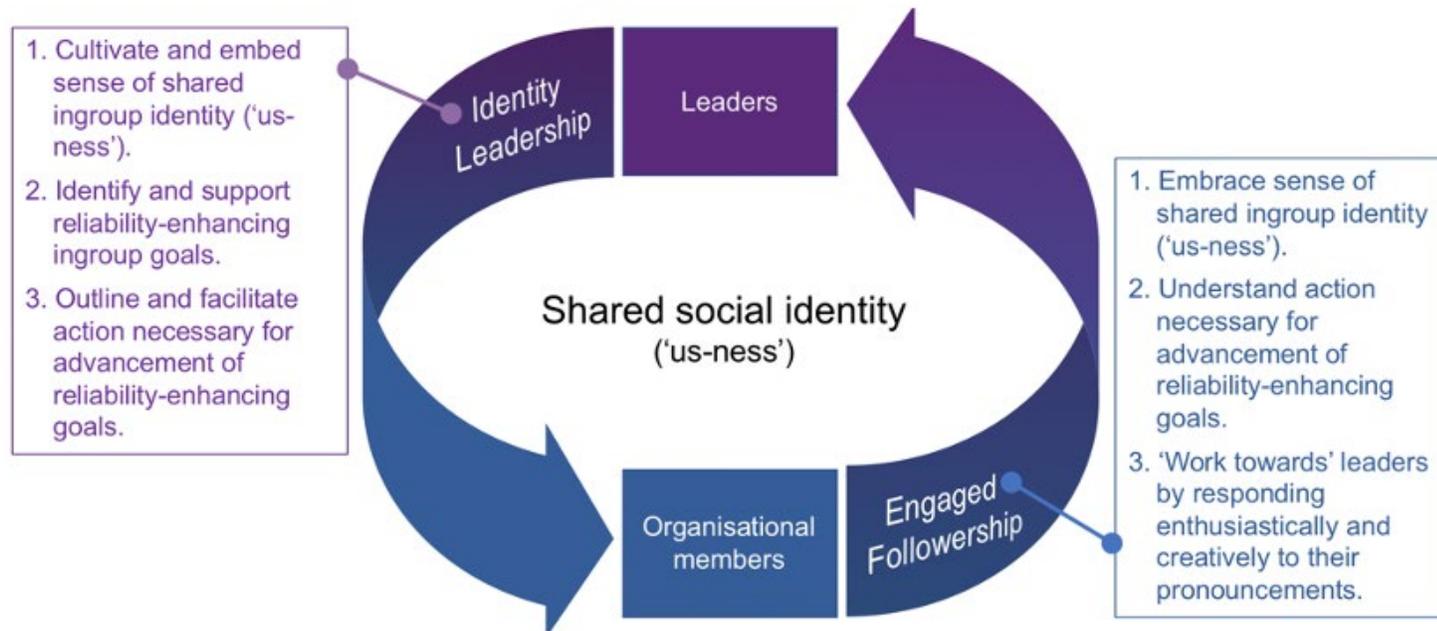
Three levels of innovation, four types of strategy

Numbers show a performance score based on market share, growth, and customer satisfaction

Innovation doesn't matter if you have No Point of Difference

Highly innovative firms outperform everyone else

But what if the difference isn't innovation?



**Identity Leadership
drives everything**

Conclusions

1. Benefits of an Innovative Mindset – doing both
2. Think Differently About Risk – discovery-driven growth
3. Innovation is essential to becoming an HRO, but not sufficient. A clear strategy and Identity Leadership are also required.

Questions?

Contact details

Tim Kastle

E t.kastelle@business.uq.edu.au

W timkastelle.org