

Innovation

What is it?

Why is it so difficult?

Some perspectives; some examples; some tools to improve your chances of success

Prof. Rick Mitchell

Two quotes

“Innovation is the capability by which we get the future we want, as opposed to the future we receive by default

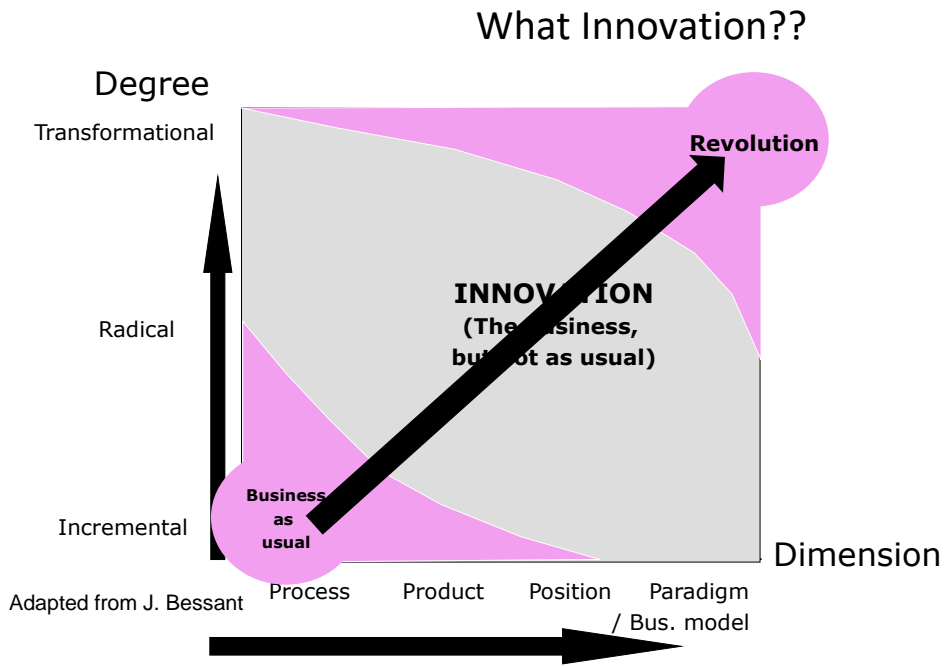
John Kao 2008

OPPORTUNITY

“He that will not apply new remedies must expect new evils; for time is the greatest innovator”

Francis Bacon c. 1600

CHALLENGE

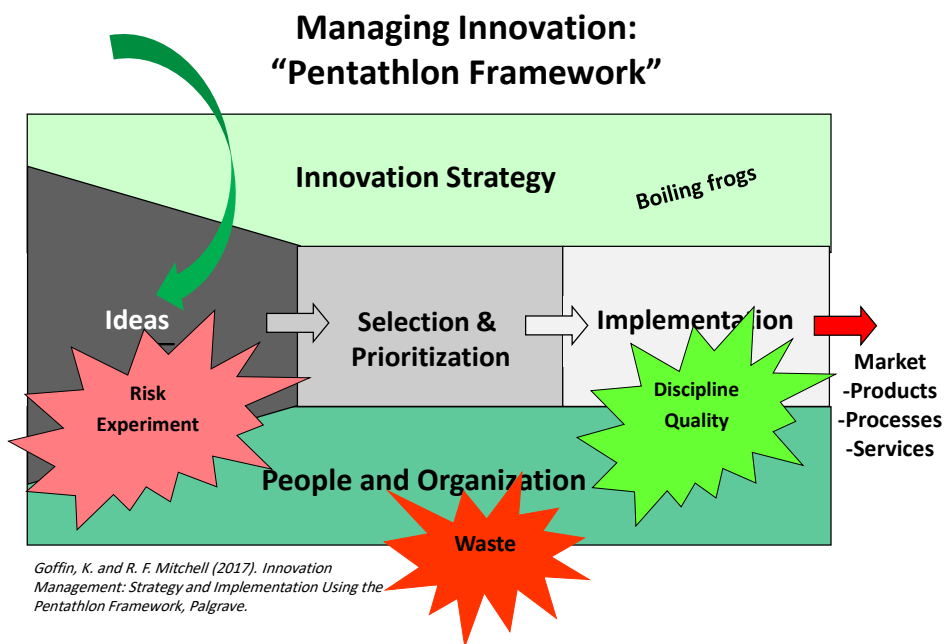


Innovation and Invention

- Murray Spengler
- Elias Howe
- NIHBWGWSTIA
- Innovation is not inventing something new, it's doing something new.

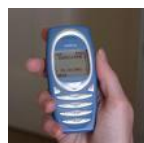
Can Innovation be managed?

Where do ideas come from?





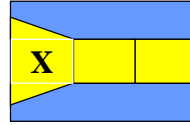
Person-to
person
Communication





- The unseen assumption is the biggest barrier to Innovation
-And the most common is: “We could never do that”

.....so don't let's even bother to think about it

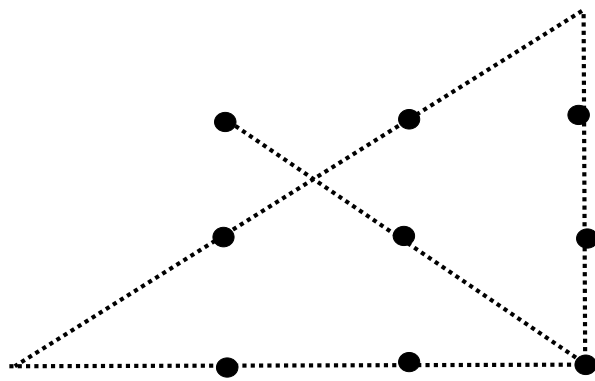
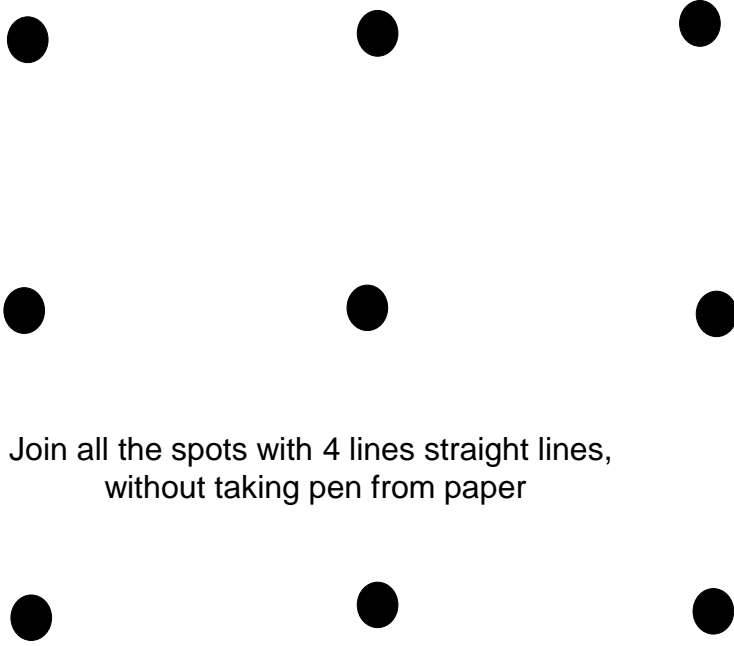


IDEAS

A Theory of Creativity

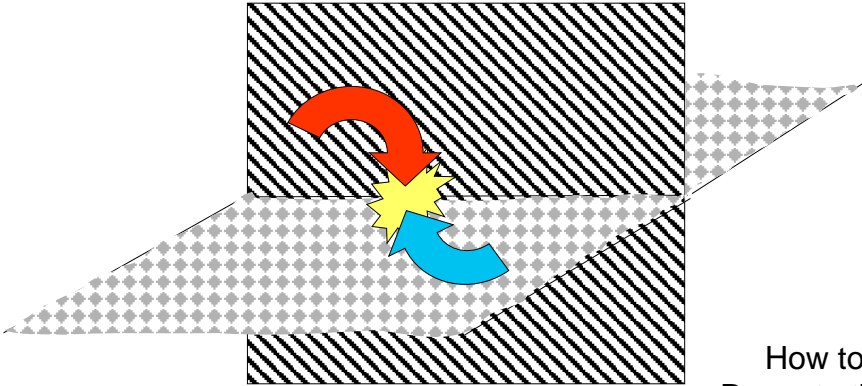
- When we think about things we always do so in some context, using ways of thinking (rules, habits, assumptions) that have been useful in the past.
- These are the mental equivalent of the reflexes and skills that we train our body to apply, unconsciously.
- Such reflexes are highly efficient tools. But they can be difficult to shake off.

A. Koestler "The Act of Creation" Hutchinson, London 1964



Hidden assumptions

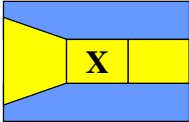
Collision of thought paths in two different matrices



Result: art; invention; humour

How to Promote this?

A. Koestler "The Act of Creation" Hutchinson, London 1964



PRIORITISATION and SELECTION

Value: summary

- In an ideal world each project would have a fully-developed financial business plan.
- “Bang for the (appropriate) buck” would give a ranking order.....

BUT

BUT

Concern about financially based
decisions...

“...over-reliance on strictly financial data and criteria may lead to wrong portfolio decisions, simply because financial data are often wrong!”

“In spite of the fact that financial methods are the most rigorous of all methods, and most popular of all tools,they yielded the poorest results on just about every portfolio performance metric.”

SO?

Ref: Cooper et. al.

4000

Do you think the highest point in Australia is
higher or lower than 4000 metres?

Please write down your answer

4000

How high do you think the highest point in
Australia actually is ?

Please write down your answer

2000

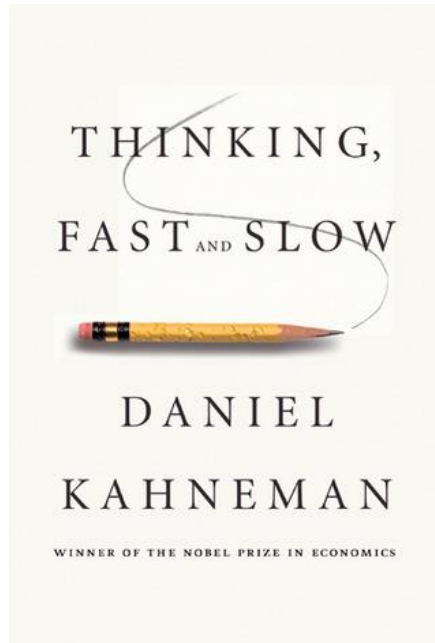
Do you think the highest point in Australia is
higher or lower than 2000 metres?

Please write down your answer

2000

How high do you think the highest point in
Australia actually is ?

Please write down your answer



Scoring methods

- Specific project information is often unavailable or unreliable
- So, assess project against general criteria known to be correlated with success e.g.
 - “Product differentiation, growth market, leverage of core skills”
 - Market sector or company criteria

Dupont's project scoring matrix

Rating scale	10	3	1	Score
Factor				
Strategic alignment	Close fit to Strategy	Supports Strategy	Not fully in line with strategy	
Value differentiation	Significant differentiation	Moderate	Slight	
Competitive advantage	Strong	Moderate	Low	
Market attractiveness	Highly profitable	Moderately profitable	Low profitability	
Fit to supply existing chain	Fits current channels	Some change, not significant	Significant change required	
Technical uncertainty	High	Medium	Low	
NPV	>\$50m	\$10-50m	<\$10m	
			TOTAL	

Source: Cooper et al.

For better examples, see

A Few more Examples of Innovation

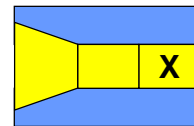


JCDecaux





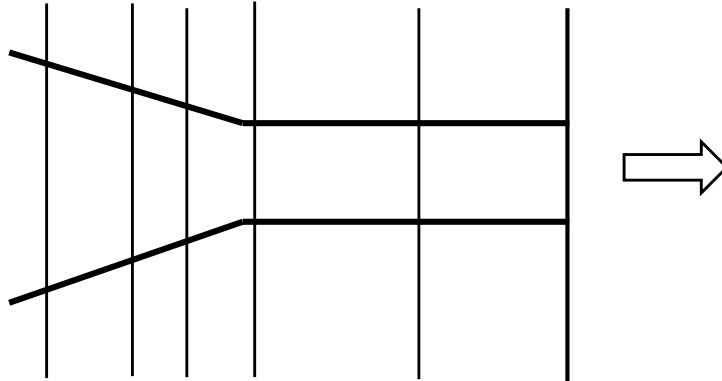
Photos: TIGER-STONE



IMPLEMENTATION

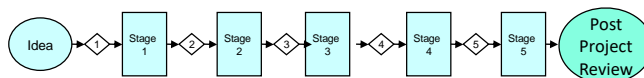
STAGE GATES

Review, decide, re-orientate



In the Fuzzy Front End

- Each phase involves learning
- Followed by a review
- Followed possibly by a redirection
- Then another review...



A different style of management overview
is required

EXPERIMENTATION

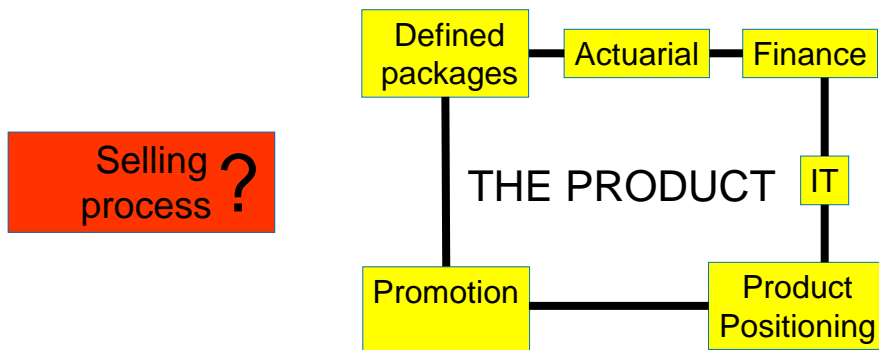


Source: Govindarajan and Trimble

Product Innovation at Allstate

**"YOUR CHOICE" AUTO
Concept**

- "Forgiveness" for accidents: *Various levels*
- Cash rewards for safe driving: *Various levels*



“The Performance Engine”



Why do people so often resist Innovation?

What can we do about that?

$$V \times P \times D > C$$

ELEMENT	DESCRIPTION	ACTIONS
Cost	What is the cost to the person/people concerned?	How could you reduce that cost?
Vision	What vision could they have of how their life will be better as a result of the change?	How can you enhance their belief in the vision?
Process	What (briefly) is the process for getting there?	How can you help them believe it can/will be done?
Dissatisfaction	What is YOUR and THEIR dissatisfaction with the status quo?	How could you increase THEIR dissatisfaction?

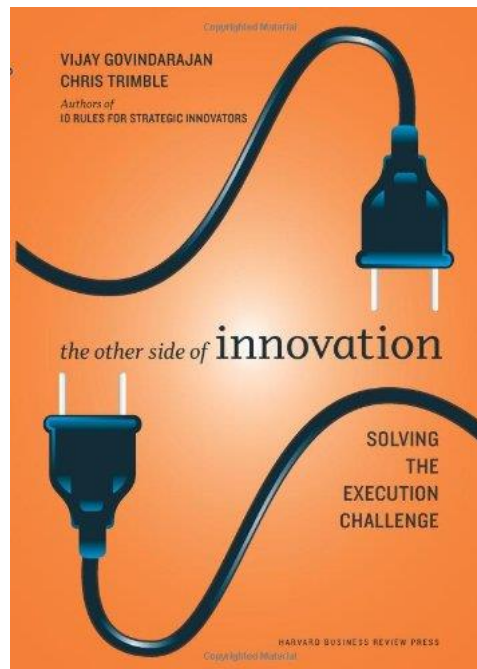
An Example

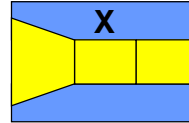


Chosen Innovation: **Post project reviews**

Person/group who may resist: **Project managers**

ELEMENT	DESCRIPTION	ACTIONS
Cost	<ul style="list-style-type: none"> - Difficult to get people together afterwards - Fear of a 'Criticism Session' 	<ul style="list-style-type: none"> - Schedule into NPD process. - Project members only. - Beer and cakes. - Team decides recommendations
Vision	<ul style="list-style-type: none"> - Less trouble on the next project. - Increased recognition of project management as a profession 	<ul style="list-style-type: none"> - Project managers 'club' to oversee. - Reports formally to Tech director 6 monthly
Process		<ul style="list-style-type: none"> - Website ready at start. - Examples from other divisions. - Pilot and publicise
Dissatisfaction	<ul style="list-style-type: none"> - Less status without . - 'Unprofessional' not to do it. - Management pressure. 	<ul style="list-style-type: none"> - Peer pressure from Club. - Objective in appraisals





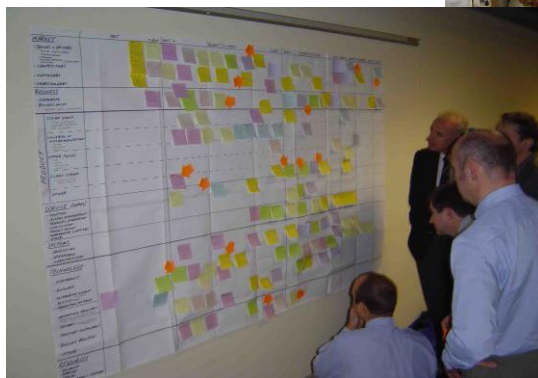
STRATEGY

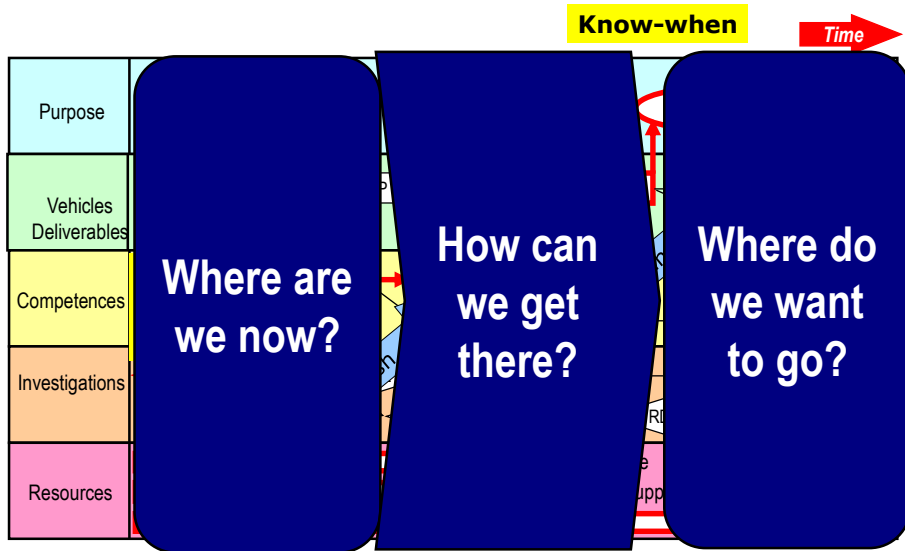
Strategic Planning

- All organisations find it difficult to develop a long-term innovation strategy
- AND link it securely to overall strategy
- AND assure understanding and support from all parts of the organisation.
- Roadmapping is one method.

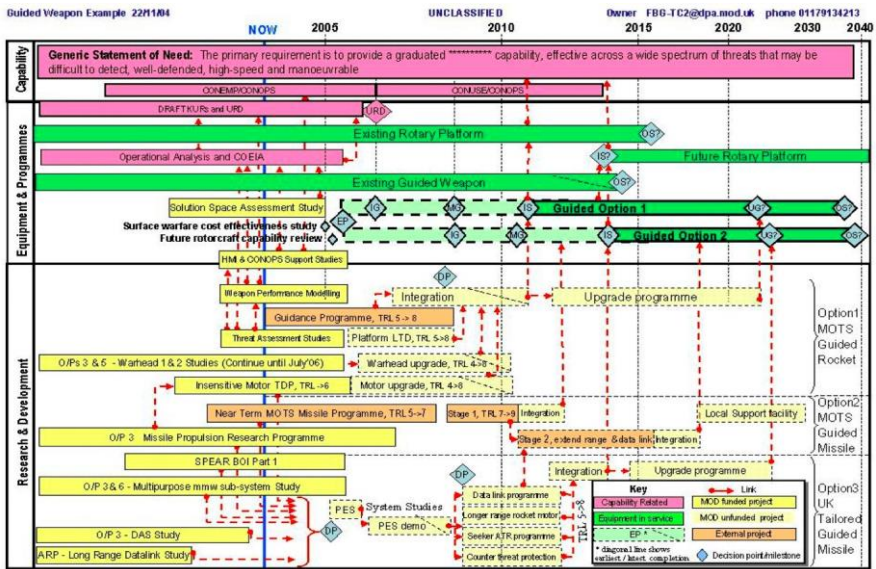
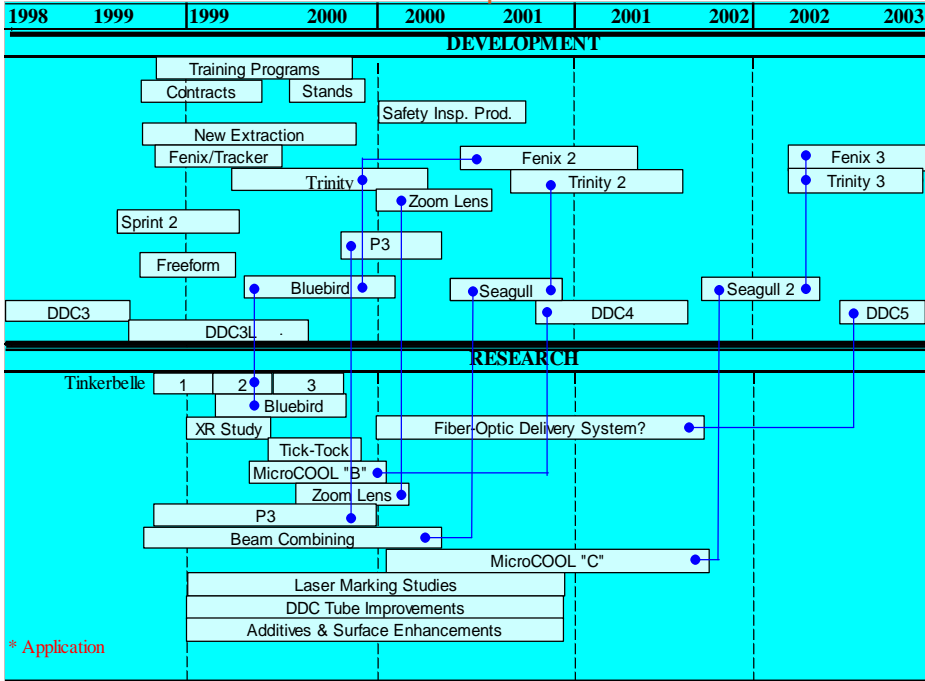


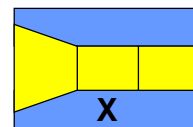
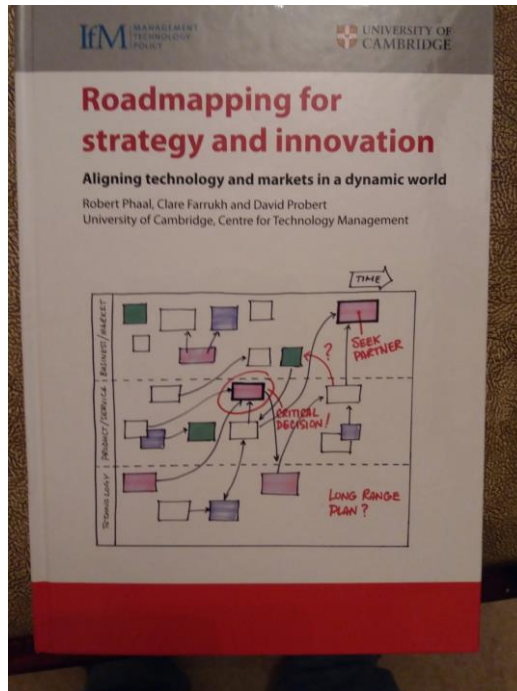
Strategy
and Communication





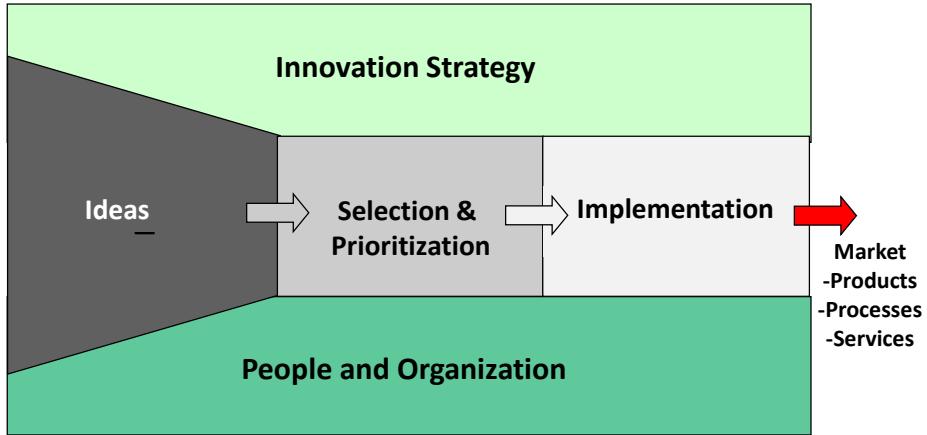
Lasers roadmap Revision 1





PEOPLE AND ORGANISATION

Managing Innovation: “Pentathlon Framework”



Goffin, K. and R. F. Mitchell (2017). *Innovation Management: Strategy and Implementation Using the Pentathlon Framework*, Palgrave.

