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Innovation: the flip side of risk

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The premise

- Innovation is inherently risky: much innovation does not succeed
- Only one-third of Australian businesses report any innovation activity (2003 ABS data)
- The other two-thirds of businesses will eventually perish or lose market share
- Many Australian boards are so focussed on managing risk that they lose sight of innovation

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Outline of talk

- Establishing credentials – the Australian Institute for Commercialisation
- The data - why innovation should be important to your business
- Some case studies of small business innovation
- Simple first steps to pursue innovation in any business
- Managing risk effectively and optimising profits

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About the AIC

- The AIC is a services organisation helping innovators achieve commercial success
- Our customer segments are businesses, research organisations, and government departments
- We deliver services that facilitate collaboration, enhance innovation and accelerate the commercialisation of know-how and technology that our clients have created.

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About the AIC

- Our **TechFast** program is funded by the Australian and a number of state governments – connecting business with research
- Our **Government Innovation Services** program helps IT businesses by brokering public-sector software for them to take to other markets
- Our **Solutions and Consultancy** group helps businesses take ideas to market by providing a variety of consultancy services
- Last year, AIC arranged 50 technology transfer deals and worked with over one hundred small businesses or start up companies.

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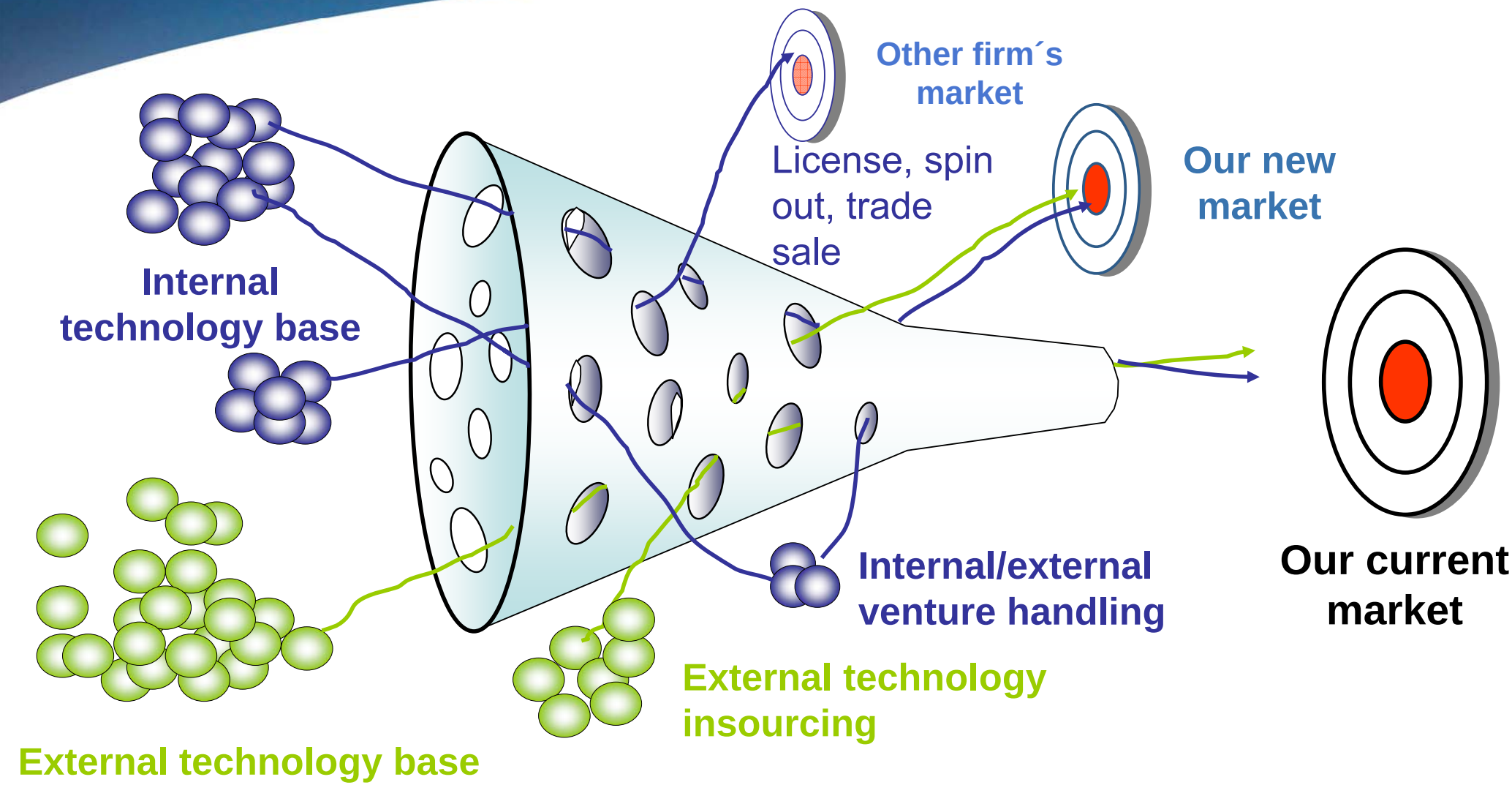
What do we mean by innovation?

- Innovation is when a novel idea or knowledge is used to create something of value in the marketplace
- 'Technological' innovation is often equated with R&D
  - frequently breakthrough and/or product innovation
- 'Non-technological' innovation is often overlooked, and can also create value
  - Process innovation
  - Organisational or business model innovation (e.g. Google)
- Innovation is always idea driven, but can change as a company grows
  - Start ups are typically product or service innovating, corporates tend to do more 'business model innovation'

Open Innovation



Source: Prof Henry Chesbrough UC Berkeley, Open Innovation: Renewing Growth from Industrial R&D, 10th Annual Innovation Convergence, Minneapolis Sept 27, 2004

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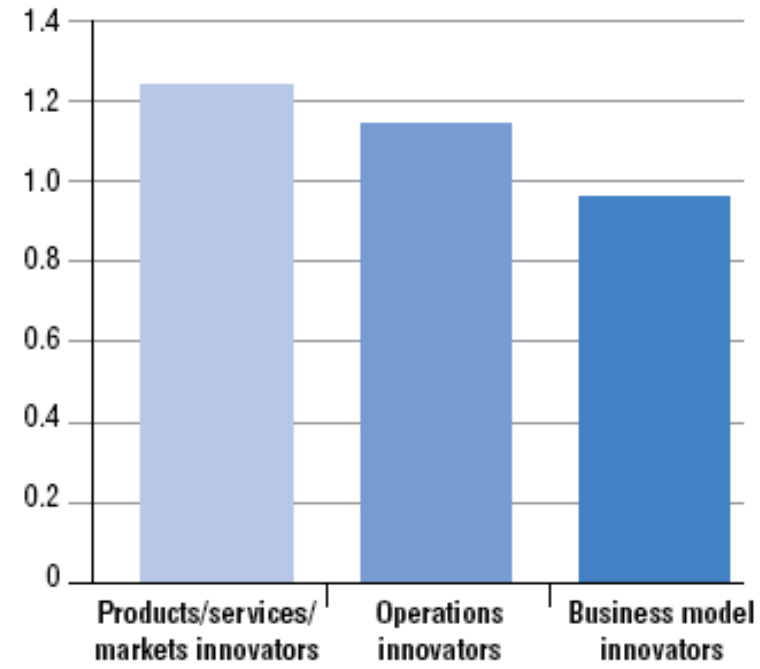
The importance of innovation to the firm

- Australian data (IPRIA)
  - The 30 of the top 50 R&D spenders for whom 5-year data was available spent four times the national average on R&D per revenue. Their return on shareholders funds was 17.1% compared with 7.7% for Australia's top 1000 enterprises.
- Global data (Boston Consulting Group Innovation Survey)
  - The 25 most innovative companies had a median annualised return of 14.3% from 1996 through 2005, a full 300 basis points better than that of the S&P Global 1200 median
  - Innovators increased median profit margins by 3.4% per year over ten years, compared with 0.4% for the median

Innovation matters!

Figure 9. Historical operating margin in excess of competitive peers.

(Percent)



Source: IBM Global CEO Survey, "Expanding the Innovation horizon" July 2006

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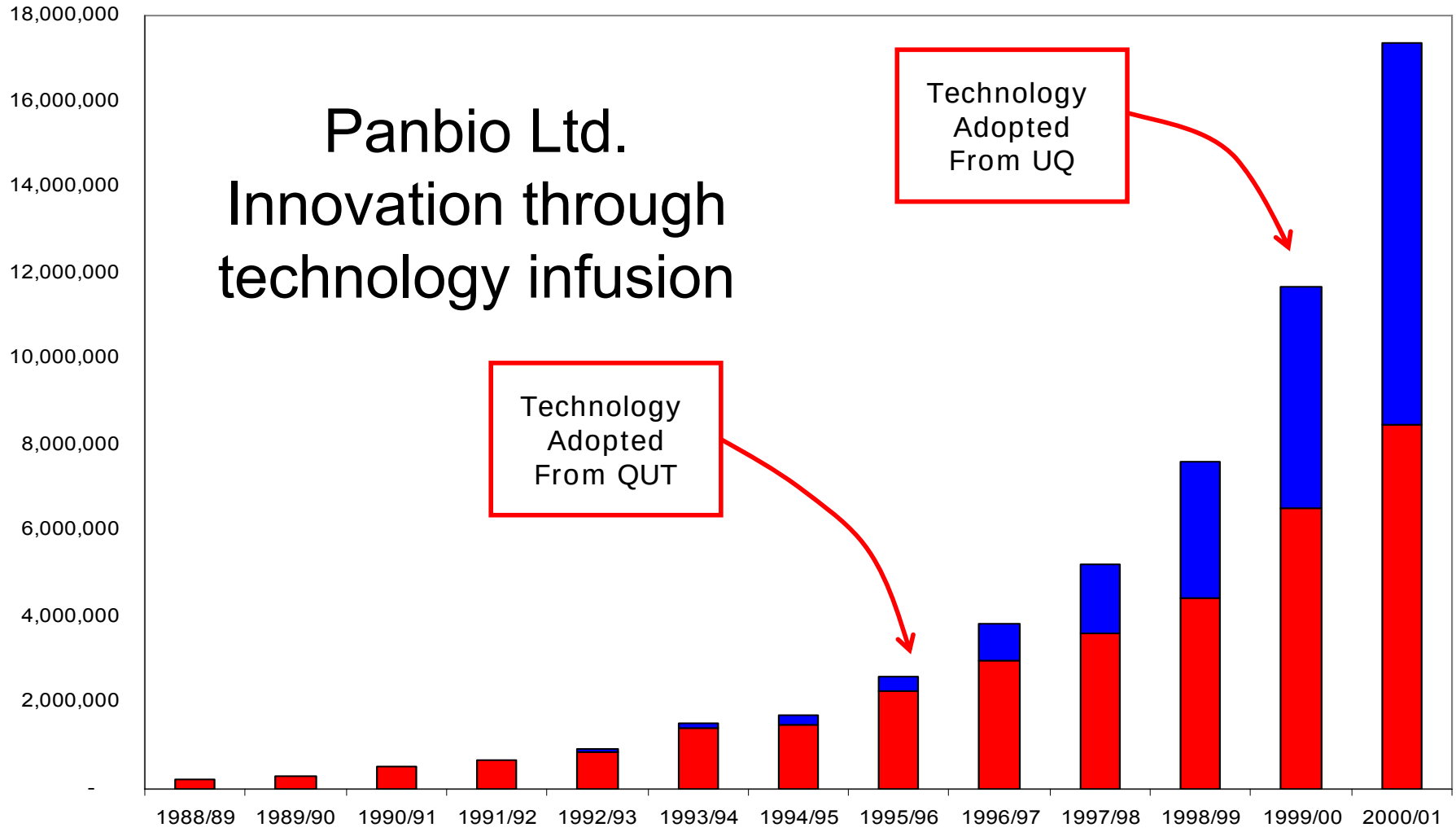
Case studies of small business innovation



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Demand Pull Innovation

- Technology Push vs. Market Pull
- TechFast typifies a market pull approach to commercialisation
  - SMEs adopt IP from a research organisation
  - Seeds collaboration, builds trust in the relationships
  - Increases business expenditure on R&D

TECH FAST®
An AIC Initiative

See www.techfast.com.au for TechFast program information

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Case Study – Defense Services ($7M pa)

Opportunity:

- Develop technology for a new defense offering and to facilitate entry into several other new industries (underwriting future sustainability)

TechFast:

- Identified ANU had platform technology that could be further developed
- Helped company assess market opportunity (due diligence)
- Facilitated IP licence negotiation between company and the university

Outcomes to date:

- IP has been transferred
- Technology customisation and commercialisation planning is underway

Company forecasts return from TechFast project will generate:

- Additional revenue of $20M by 2010
- 28 additional jobs by 2010.
- Additional export revenue of $19M by 2010

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First steps to pursuing innovation

- The best single step you can take is to

  Put innovation as a standing item on the Board agenda

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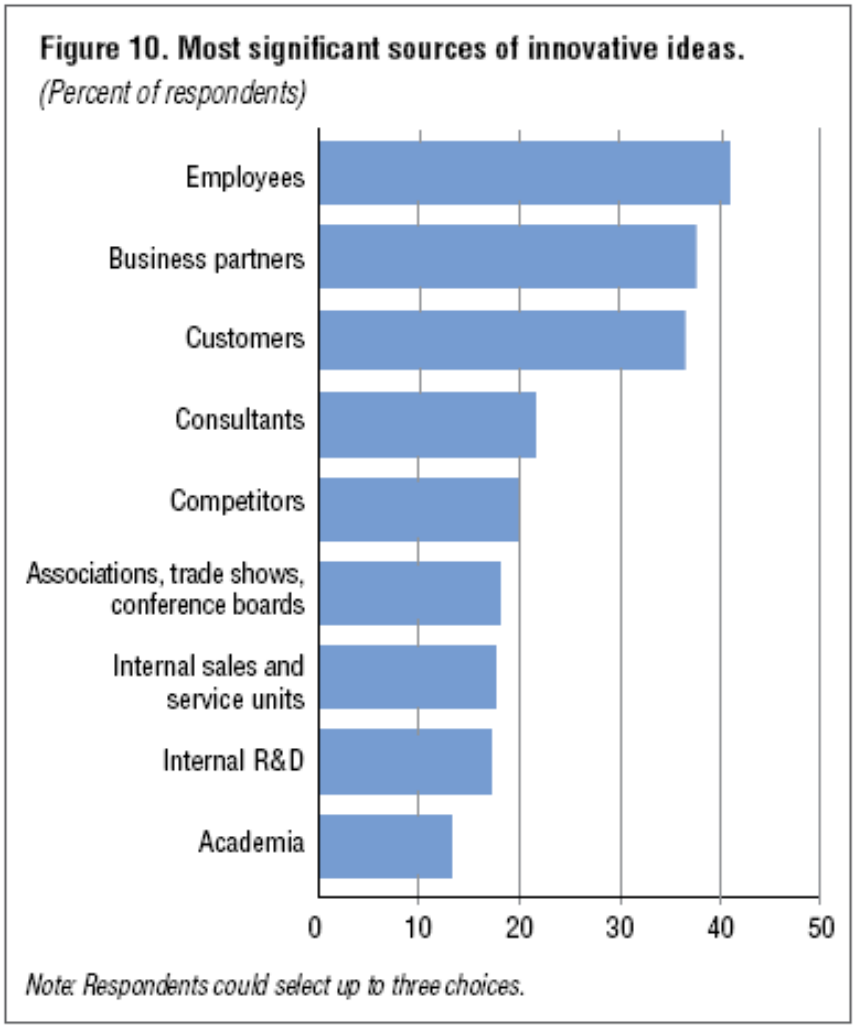
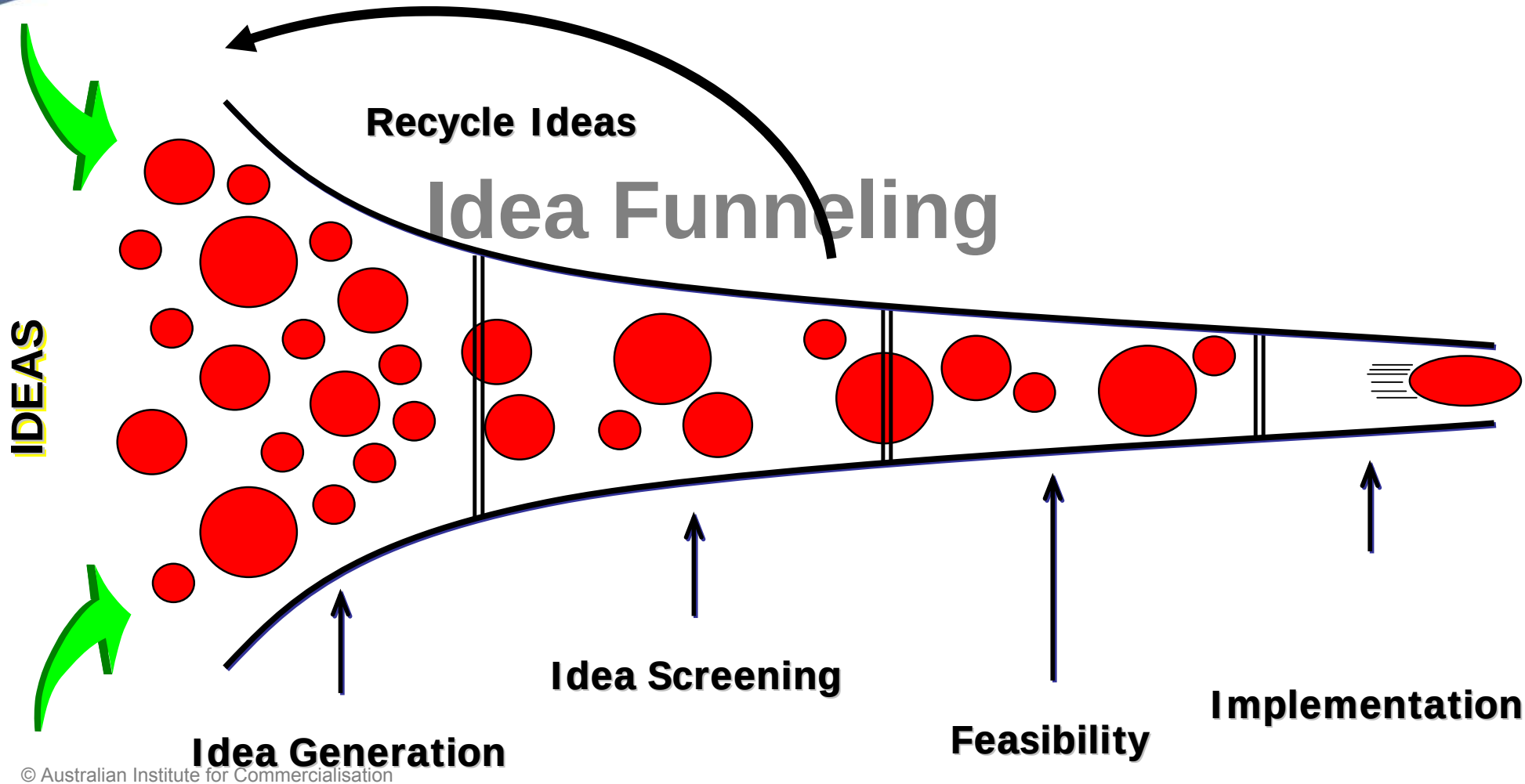
The discovery process

Identifying useful ideas

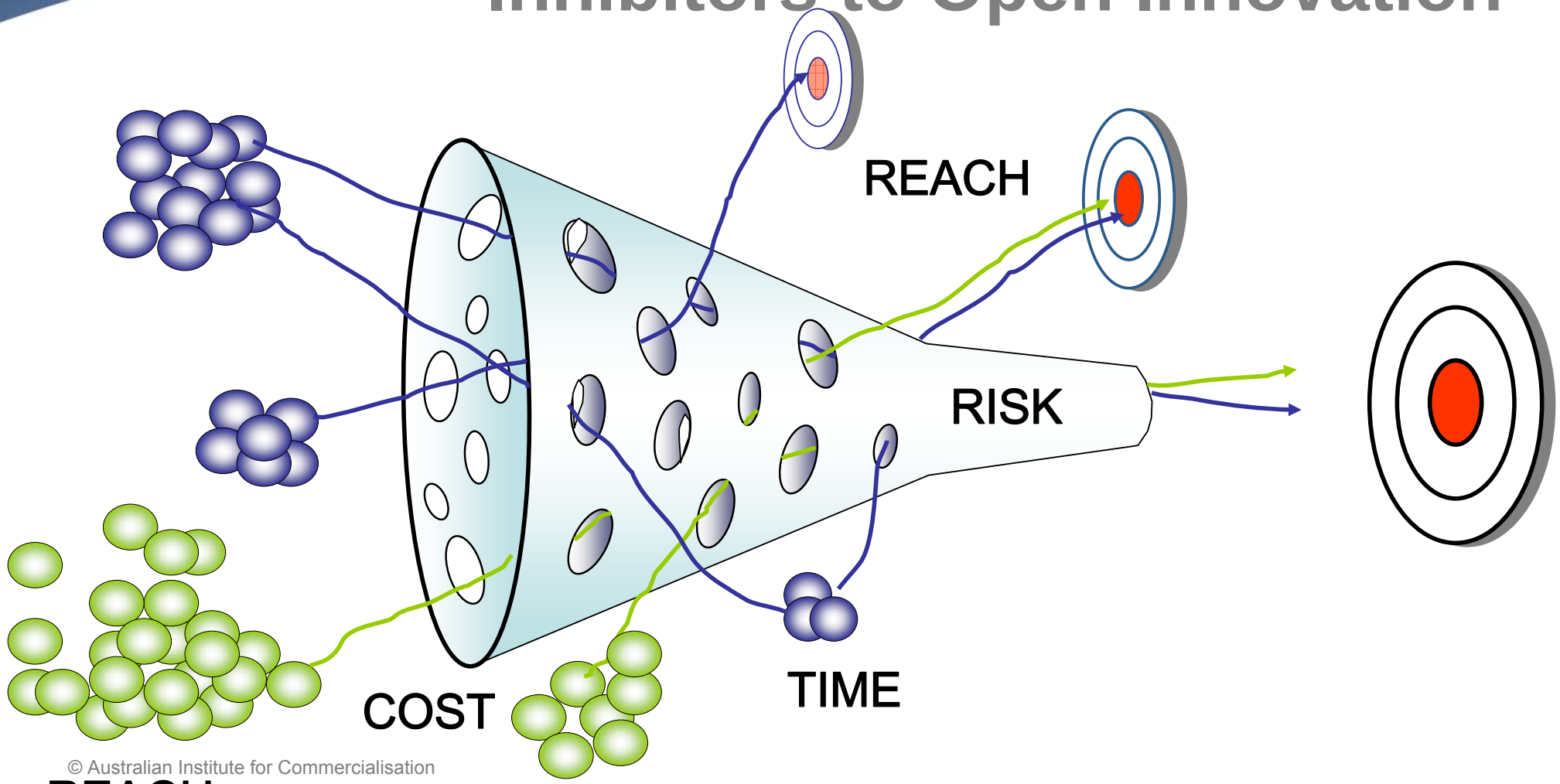


Source: IBM Global CEO Survey, "Expanding the Innovation horizon" July 2006

Idea Funneling



Inhibitors to Open Innovation



The collaboration gap

Figure 12. Importance versus extent of collaboration and partnering.

(Percent of respondents)

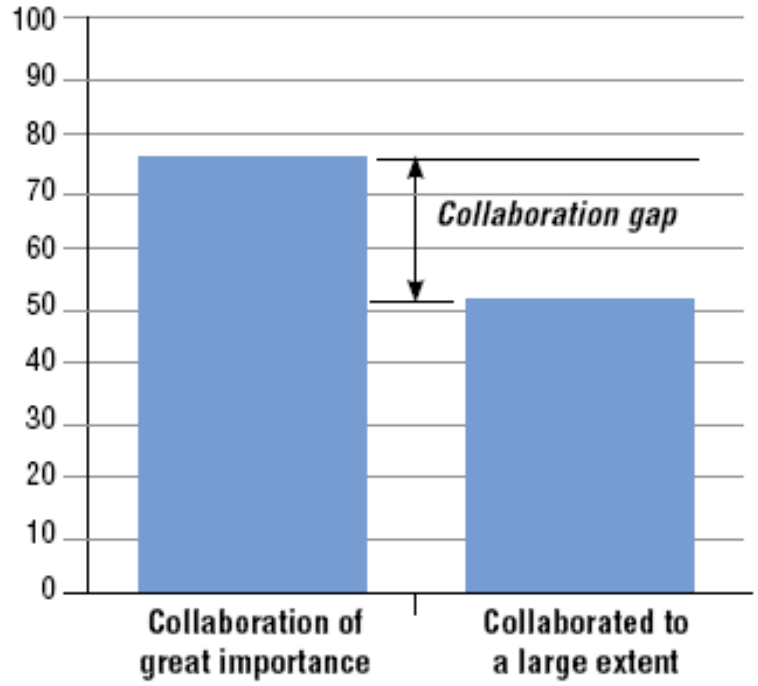


Figure 13. Collaboration and partnering benefits cited by CEOs.

(Percent of respondents)

Source: IBM Global CEO Survey, "Expanding the Innovation horizon" July 2006

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From Idea to IP

Output Idea	Intellectual Property	Example – it would protect
Trade and commercial secrets	Confidential information	Secret information about how well a mousetrap works
Inventions	Patents	A new mousetrap
Authored and artistic works	Copyright	A drawing of a mousetrap
Trade mark and trade reputation	Unregistered and registered trade marks	A Mousetrap™ logo or a Mousetrap® registered logo
Industrial designs	Registered designs	A stylish mousetrap
Circuit layouts	Eligible circuit layout rights	An integrated circuit designed to control a mousetrap
New plant varieties	Plant Breeders Rights	A hybrid venus flytrap that eats mice

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Strategic IP Management

Conduct an IP Audit → Database

Identify IP in your Organisation

Value your IP – registered & unregistered

Protect your valuable IP

Develop and Exploit your IP → Commercialisation

Educate and engage employees - culture

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What IP audits must do to avoid failure

- AIC uses an IP audit checklist
- Details and procedure available online through AIC's Gateway Enterprise system:
  - IP procedures (policies, disclosure, protection…)
  - IP identification (notebooks, contracts, software…)
  - Review of registered IP (including renewal, usage…)
  - Review of unregistered IP (as above)
  - Contract terms (IP assignment, ...)
  - Licence terms
  - Employment contracts (students, contractors, …)
  - Document management (nondisclosures, inventorship…)
- Keep updating the audit data!

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Valuation of IP

- What are your IP assets worth?
- To whom are they valuable?
- Is the value financial or in another form?
- Are they measurable individually or as a collective?

- The Value of IP - ultimately defined as the amount someone is prepared to pay

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IP Selection Criteria

Value Criteria

- IP Valuation
- Strategic Fit
- Economic return
- Freedom to Operate
- Competitive advantage

Effort Criteria

- Capital required
- People resources
- Timing (short/long)
- Ease of commercialisation
- Target market exists

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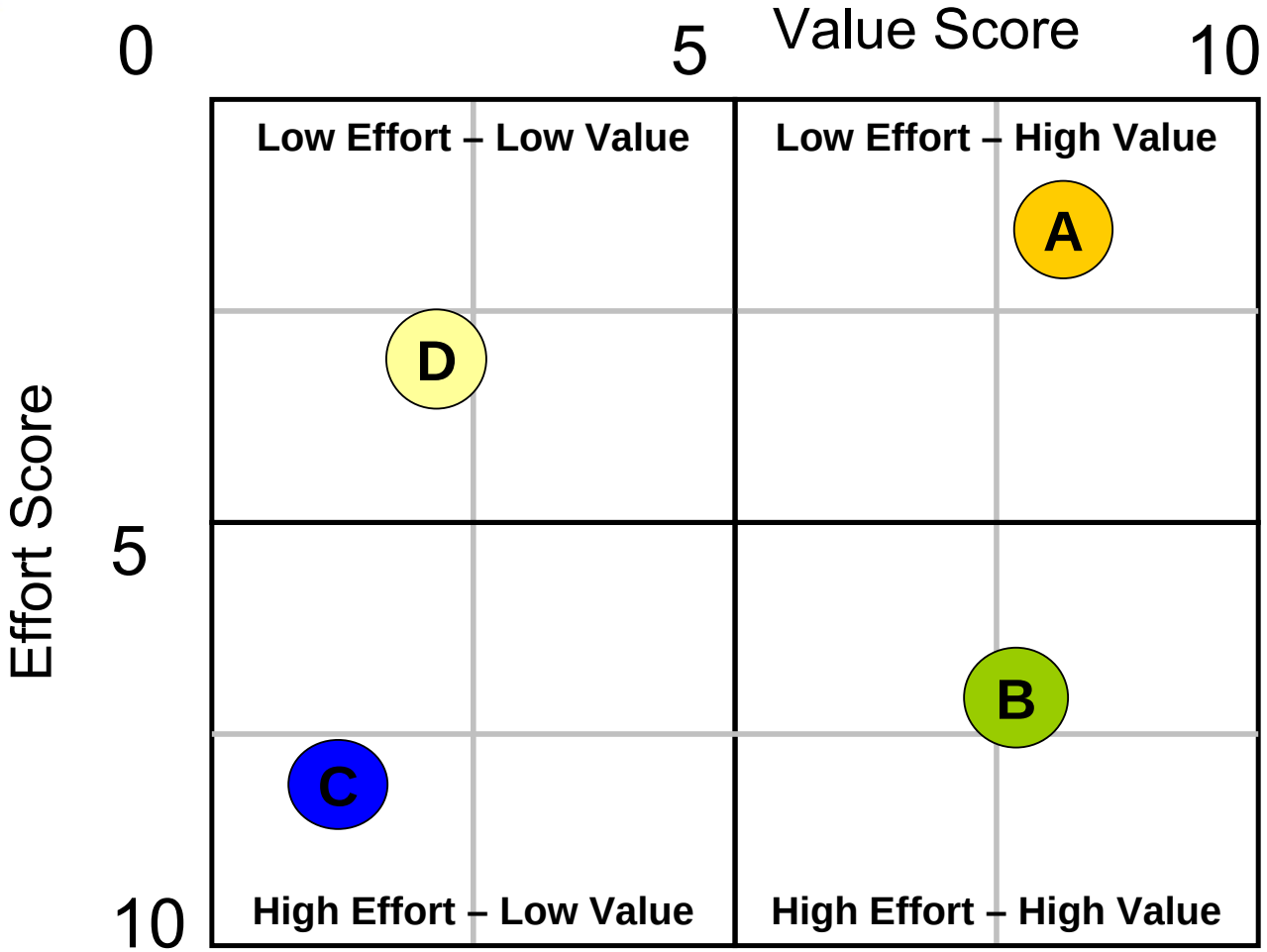
Opportunity Screening



Type A

➢Assign Top Priority

Type B

➢Identify how to Reduce effort

Type C

➢Divest IP

Type D

➢Identify how to increase value

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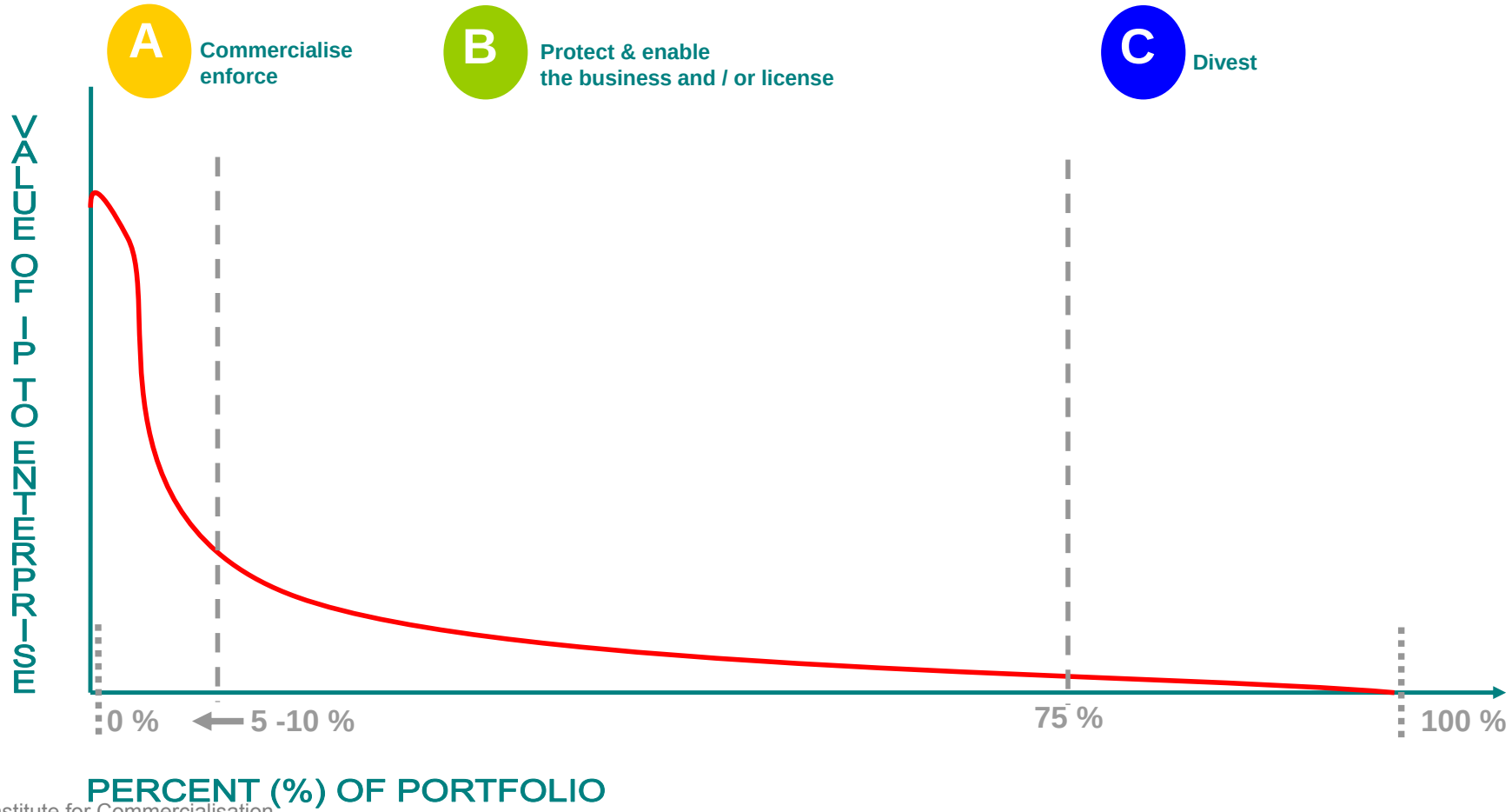
Value Distribution of an IP Portfolio



Source: Acorn Technologies, Inc.

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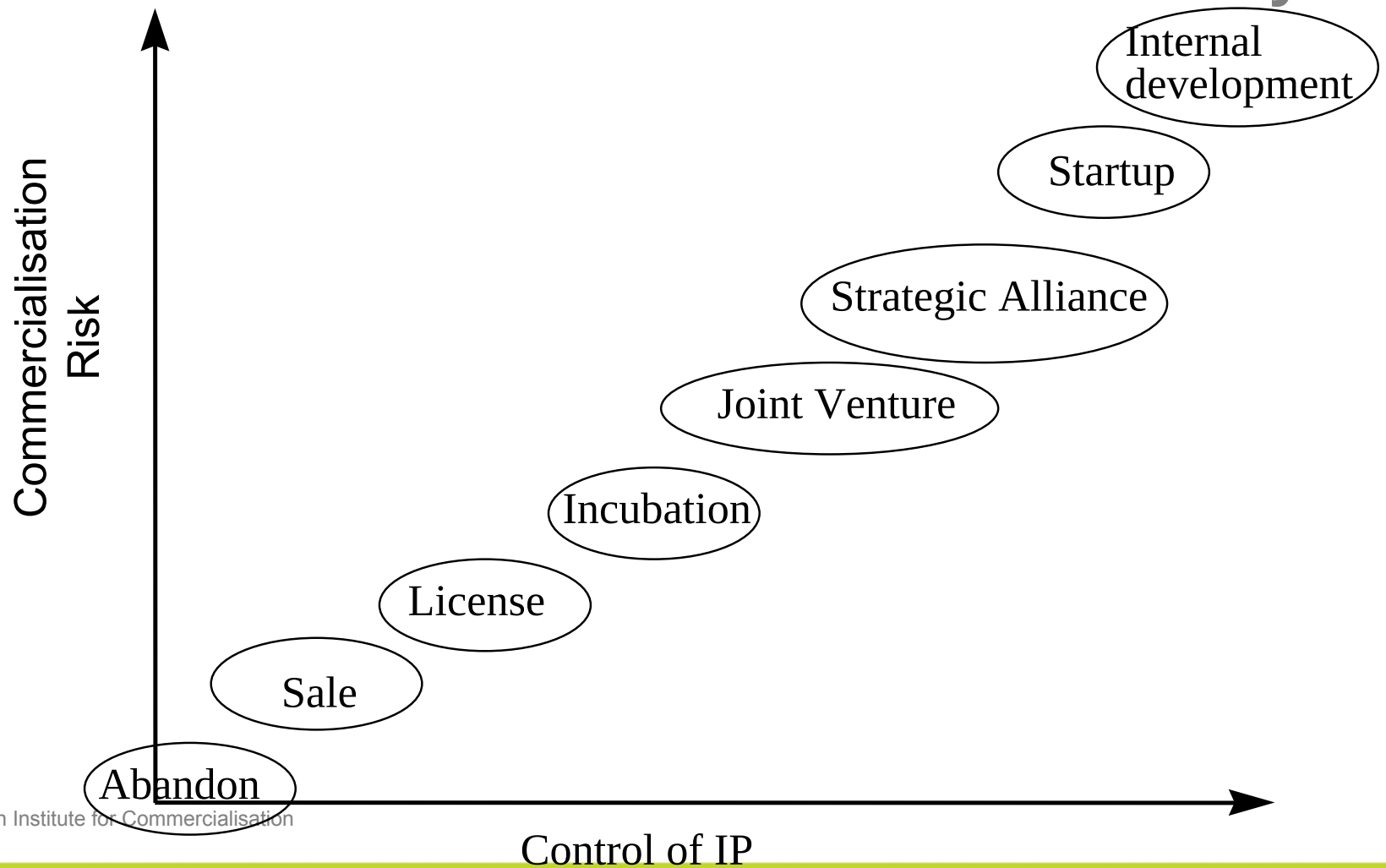
Generic Commercialisation Pathways



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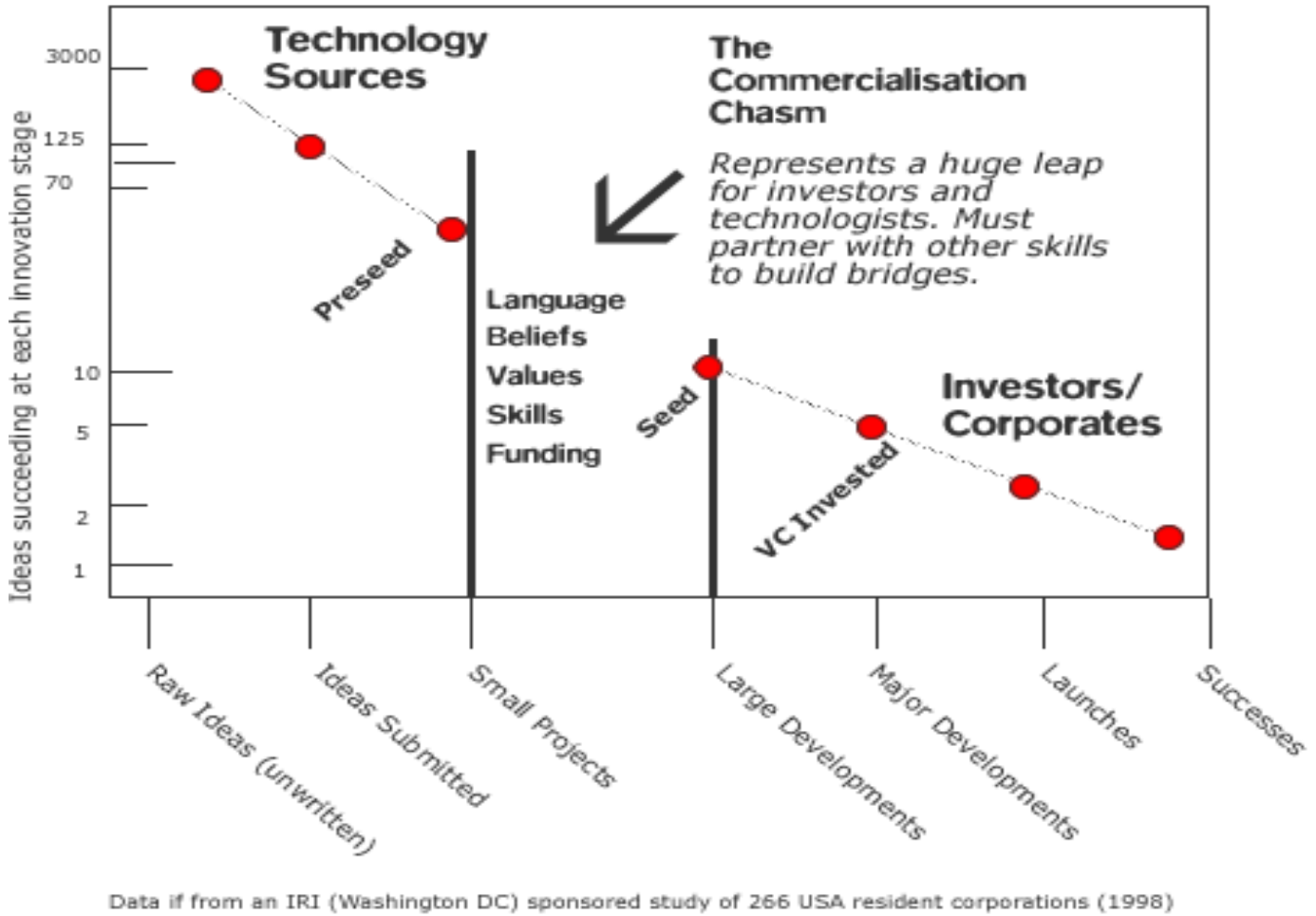
Commercialising Your IP Rights

	Risk	*Profit*	*Control*	*Management*
Licence	small	low - medium	low-med	low
Assign	small	very low -medium	none	none
JV	low-medium	medium - high	medium	high
Outsource	low - medium	medium - very high	complete	high
Start Up	high	none - very high	according to equity	depends on equity

Commercialisation Chasm



Data if from an IRI (Washington DC) sponsored study of 266 USA resident corporations (1998)

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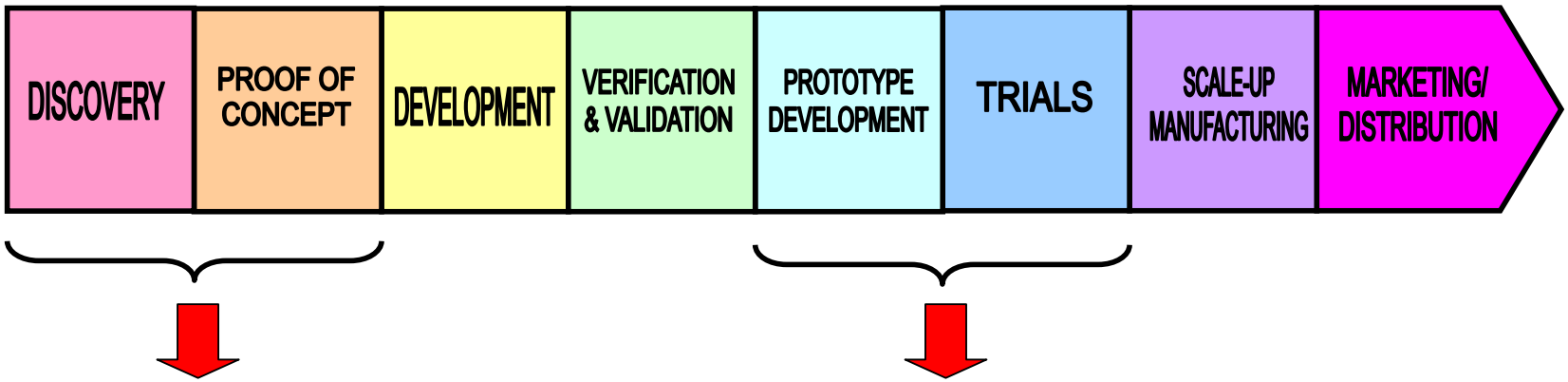
Commercialising across the value chain



Early Commercialisation

- Lower value
- Lower risk
- Early Revenue streams
  - Fund development
  - Fund further R&D
  - Fund IP protection
- Technology needs to be proven

Late Commercialisation

- Higher value added
- Late Revenue streams
  - Funds clinical trials
- Technology proven
- Higher potential returns and royalties
- Increased uptake of technology

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Considerations in commercialisation

Technology / Opportunity Description of the Opportunity Uniqueness IP Protection (FTO) Ownership Issues How much technical development remains? Proof of technical concept	**Market** Analysis of market/target market Key customers/competitors Potential distribution channel/Route to market Key success factors Any impediments?
Partners / Collaborators Describe who they are Benefits to the project Future technical and strategic support needed Outsourcing	**Management Team** Technical and commercial experience of team Skills to progress project External resources required
Business Model Business Model/structure/governance Revenue model and revenue potential by key markets Key risks/sensitivities Anticipated costs – development/production/distribution Key timeframes and milestones	**Funding Requirements** How much funding is required? What will this be used for? Funding sources – Gov or private Potential ROI

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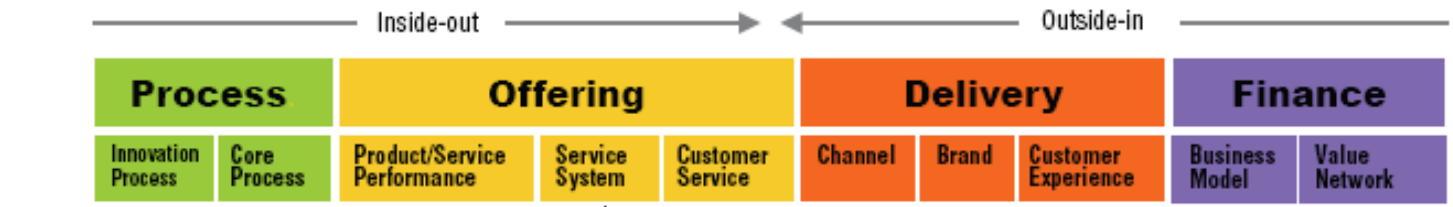
Innovation in a service company

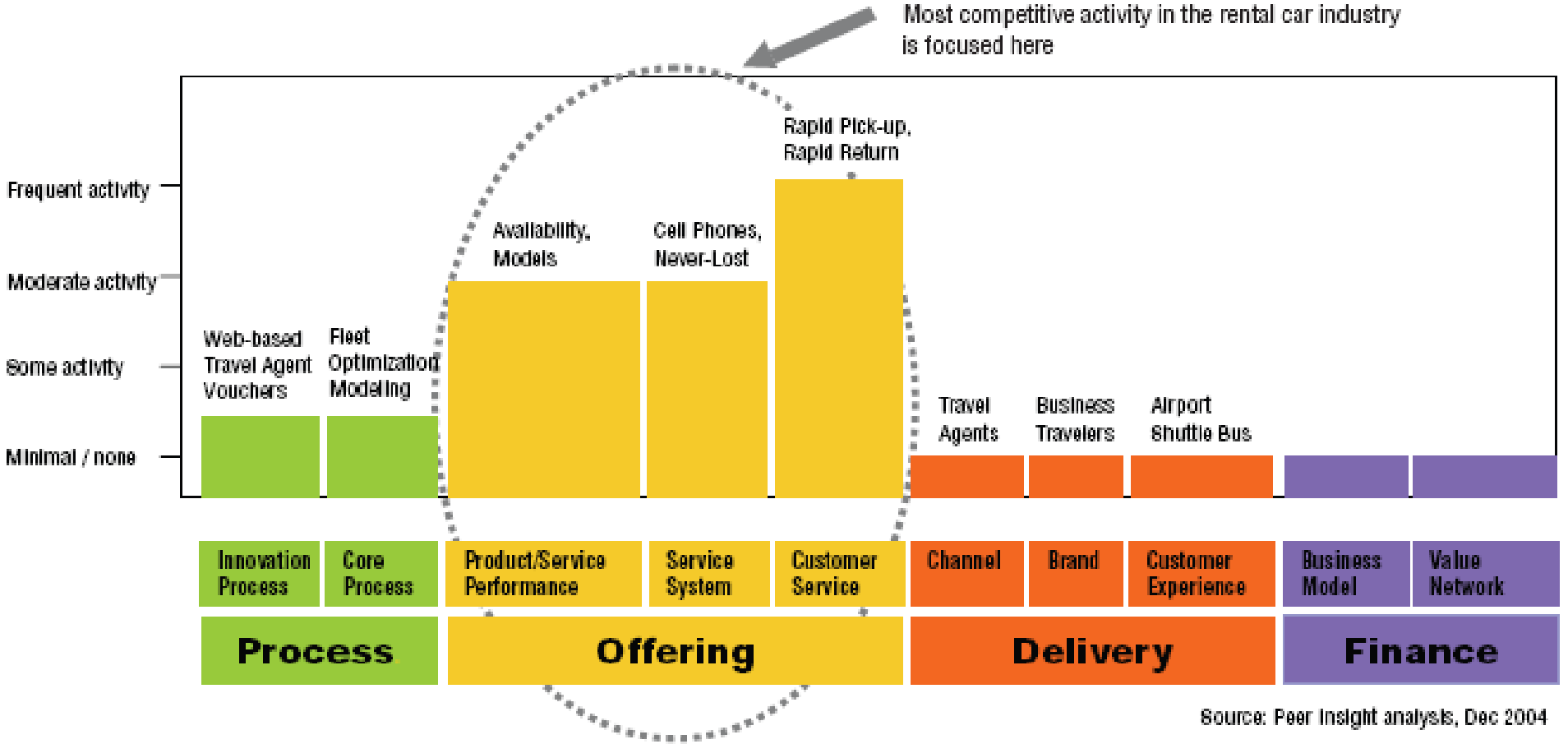
- Many economies are dominated by services companies
- How do financial services, logistics and transport, infrastructure companies innovate?
- Leverage a region's iconic status
  - Packaging and brand innovation (e.g. Coonawarra)
- Enterprise model innovation
  - Review role in value chain and change collaborations
- "Servicizing" a product

The ten types of innovation



"The Ten Types of Innovation", by Larry Keeley/Doblin Inc. (1999)

Competition in the car rental industry

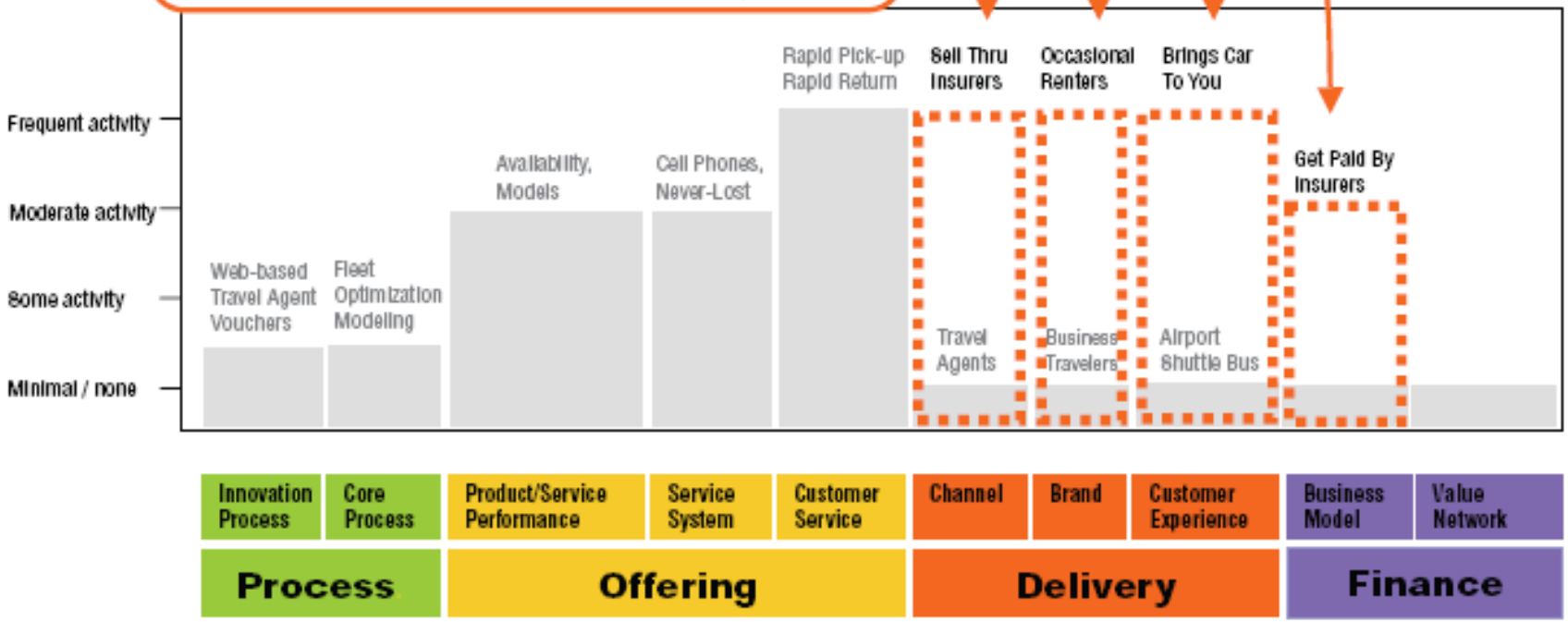


Source: Peer Insight analysis, Dec 2004

Innovation in the car rental industry

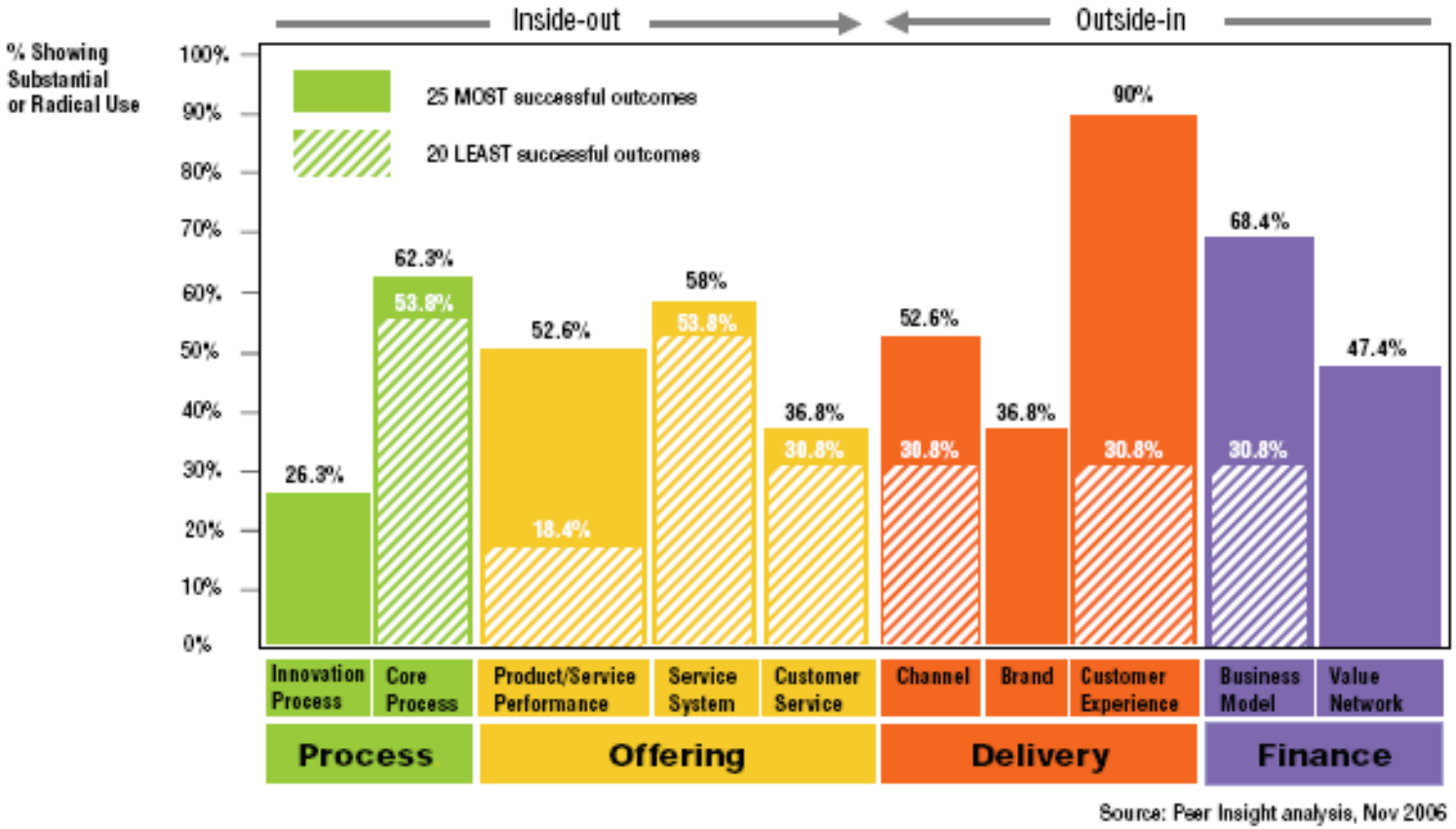
Enterprise rent-a-car

- Largest car rental company ($6.9B vs. $4.9B for Hertz, $2.5B for Avis)
- Targets the occasional renter
- Uses the insurance company channel
- Brings the car to the renter; avoids cost structure of airport real estate



Source: Peer Insight analysis, Dec 2004

Where services innovation succeeds



Source: Peer Insight analysis, Nov 2006

Note 1: Figure shows the difference in percentage of use of each of the Ten Types of Innovation between the 25 most successful and twenty least successful projects in the Peer Insight 100 data set.

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Managing risk effectively and optimising profits

- Innovators reap increased profit margins compared with non innovators – all the evidence proves it
- Innovation should therefore be core business
  - Creating something the marketplace values from a novel idea
  - Institutionalise innovation
  - Formalise the idea capture, evaluation, and commercialisation phases
- The flip side of innovation is risk and can be mitigated in the normal way

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Consequence

5 Catastrophic	**High Risk**	**Extreme Risk**	**Extreme Risk**	**Extreme Risk**	**Extreme Risk**
4 Major	**High Risk**	**High Risk**	**Extreme Risk**	**Extreme Risk**	**Extreme Risk**
3 Moderate	**Moderate Risk**	**Moderate Risk**	**High Risk**	**High Risk**	**Extreme Risk**
2 Minor	**Low Risk**	**Low Risk**	**Moderate Risk**	**High Risk**	**High Risk**
1 Insignificant	**Low Risk**	**Low Risk**	**Low Risk**	**Moderate Risk**	**High Risk**
	1 Rare	**2 Unlikely**	**3 Moderate/Possible**	**4 Likely**	**5 Almost Certain**

Likelihood

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Innovation and Risk Mitigation

- Technical risks
  - Ensure the new products or services work
  - Will they deliver what is promised?
- IP protection risks
  - Do you own it and do you have the right to sell and distribute content?
  - How strong is the IP Protection?
  - Licensing issues
- Brand protection
  - Is there a risk to the trademark in delivering the product or service?
  - What is the quality of the products and services delivered to new markets? E.g. overseas GTOs
- Business risks including relationship risks
  - Check alignment and understanding of key interests and drivers
  - Distributors or partners should be able to deliver content as an extension to ATDW
- Resourcing risks
  - Can the new projects be adequately resourced and funded?
  - Skills and resources to deliver the new services
  - Risk of losing key staff
- Reputation risks
  - Costs of maintaining product or service in terms of liability, delivery, ongoing support and further enhancement.
- Political risks

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Take-home messages

- It's innovate or perish
- Innovation is not just for market leaders or big firms
- Innovation begins with an idea, creating IP, and then converting that IP to value in the marketplace
- Risk aversion can paralyse innovation
  - Balance the board