

I Am Not a Cat

Tim Kastle – Professor and Director, Andrew N. Liveris Academy for Innovation & Leadership, The University of Queensland

30 October 2024 – CIRES Information Resilience PhD School

Acknowledgment of **Country**

I'd like to acknowledge the Traditional Owners – the Jagerra and Turrbul people - and their custodianship of the lands on which we meet.

We pay our respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country.

We recognise their valuable contributions to Australian and global society.



My First Research Program

ARC

**AUSTRALIAN RESEARCH COUNCIL
DISCOVERY PROJECTS
APPLICATION FORM FOR FUNDING COMMENCING IN 2009**

DP

Proposals must comply with the requirements of the *Discovery Projects Funding Rules for funding commencing in 2009*, and any content, font and page limit requirements specified in this form and the Instructions to Applicants document.

PROJECT ID: DP0986218

Total number of sheets contained in this Proposal

Information on this form and its attachments is collected in order to make recommendations to the Minister on the allocation of financial assistance under the Australian Research Council Act 2001 and for post award reporting. The information collected may be passed to third parties for assessment purposes. It may also be passed to the National Health and Medical Research Council, the Department of Foreign Affairs and Trade, the Department of Industry, Tourism and Resources, the Department of the Environment and Water Resources, the Department of Education, Science and Training, the Department of Agriculture, Fisheries and Forestry and the Department of Veterans' Affairs for the purpose of checking eligibility. In other instances, information contained in this Proposal can be disclosed without your consent where authorised or required by law.

PART A—ADMINISTRATIVE SUMMARY

A1 ORGANISATION TO ADMINISTER FUNDING

(Please note this question must be completed first)

Name

A2 PROPOSAL TITLE

(Provide a short descriptive title of no more than 20 words. Avoid the use of acronyms, quotation marks and upper case characters.)

A3 PARTICIPANT SUMMARY

A3.1 Participant Details - Current Organisations

Enter details of the lead Chief Investigator or Fellow at Person number 1.

Chief Investigators (CI), Partner Investigators (PI) and ARC Fellows - APD, ARF/QEII or APF.

Person number	Family Name	Initials	Current Organisation	Role	ECR
1	Steen	JT	The University of Queensland	CI	X
2	Kastelle	TH	The University of Queensland	CI	X
3	Dodgson	MJ	The University of Queensland	CI	

Metrics:
4 Industry partners
2 PhDs
14 Publications
4 Promotions

Impact of the Research

One mine in WA changed the membership of their Water Committee.

My startup



Impact of the Startup

None

There are
3 parts

to innovation:

New

Ideas...



made
real...



... to unlock value.



New
Ideas...



...made
real...



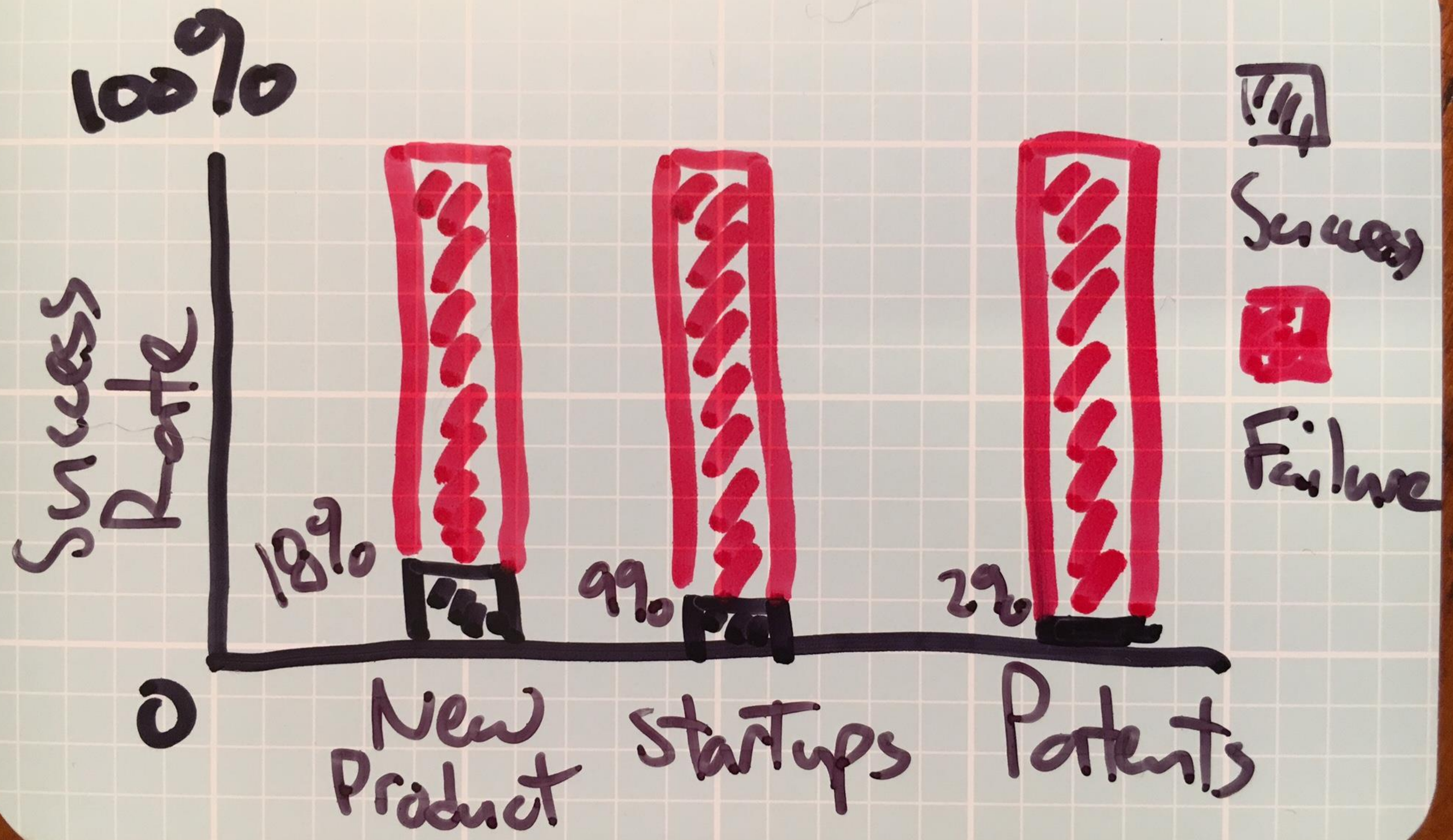
...to unlock value.

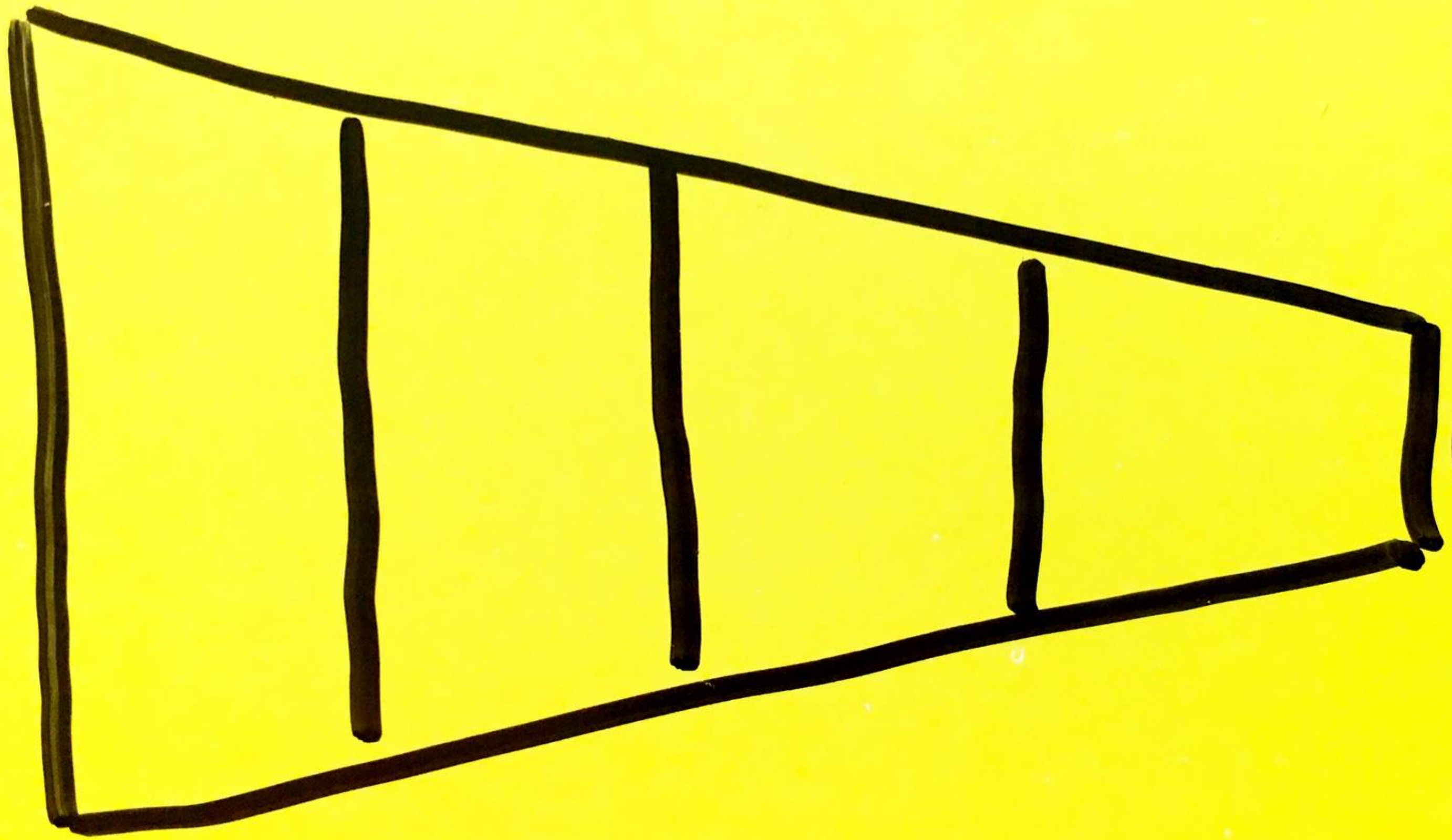


Problem:

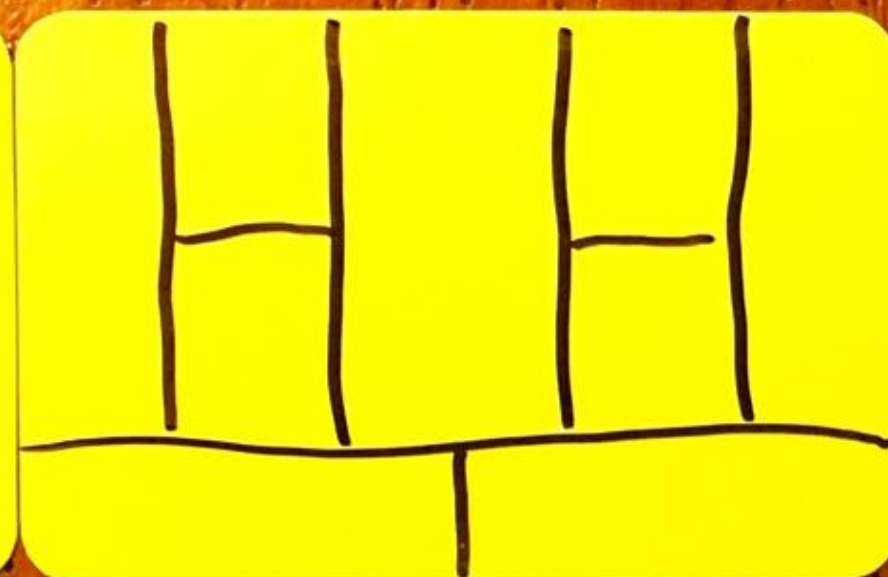
Most new ideas

fail to create value

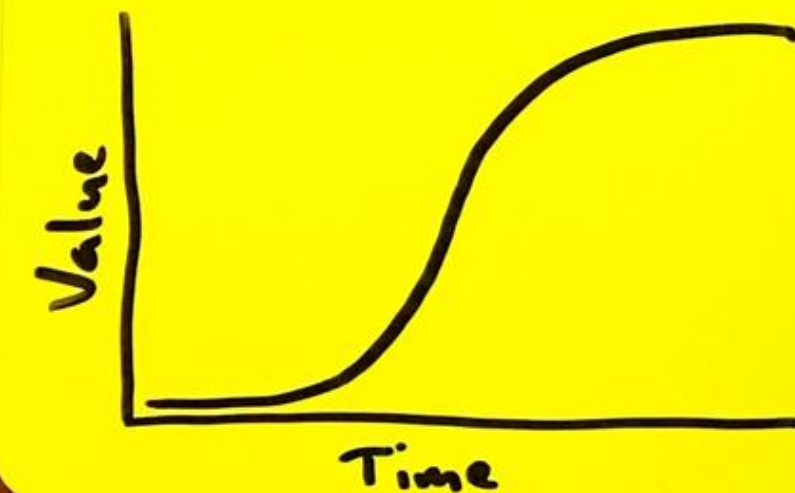




Growth!



\$ € £ ¥ ¥



Build
Idea

Validate
Business
Model

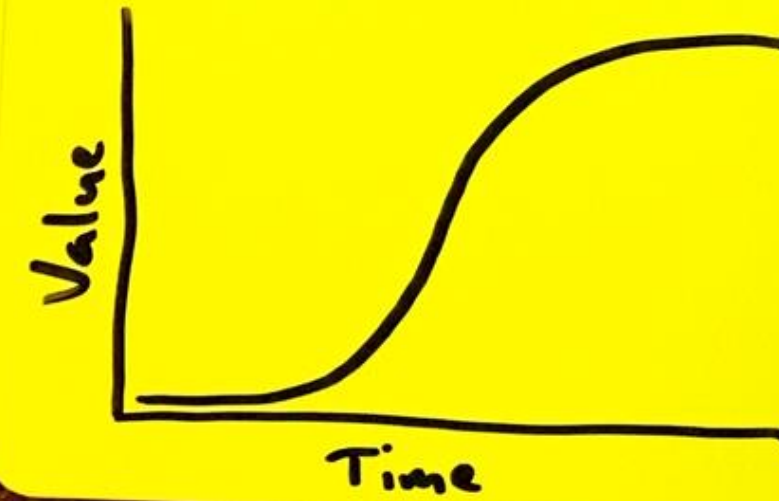
Launch

Scale



Build
Idea

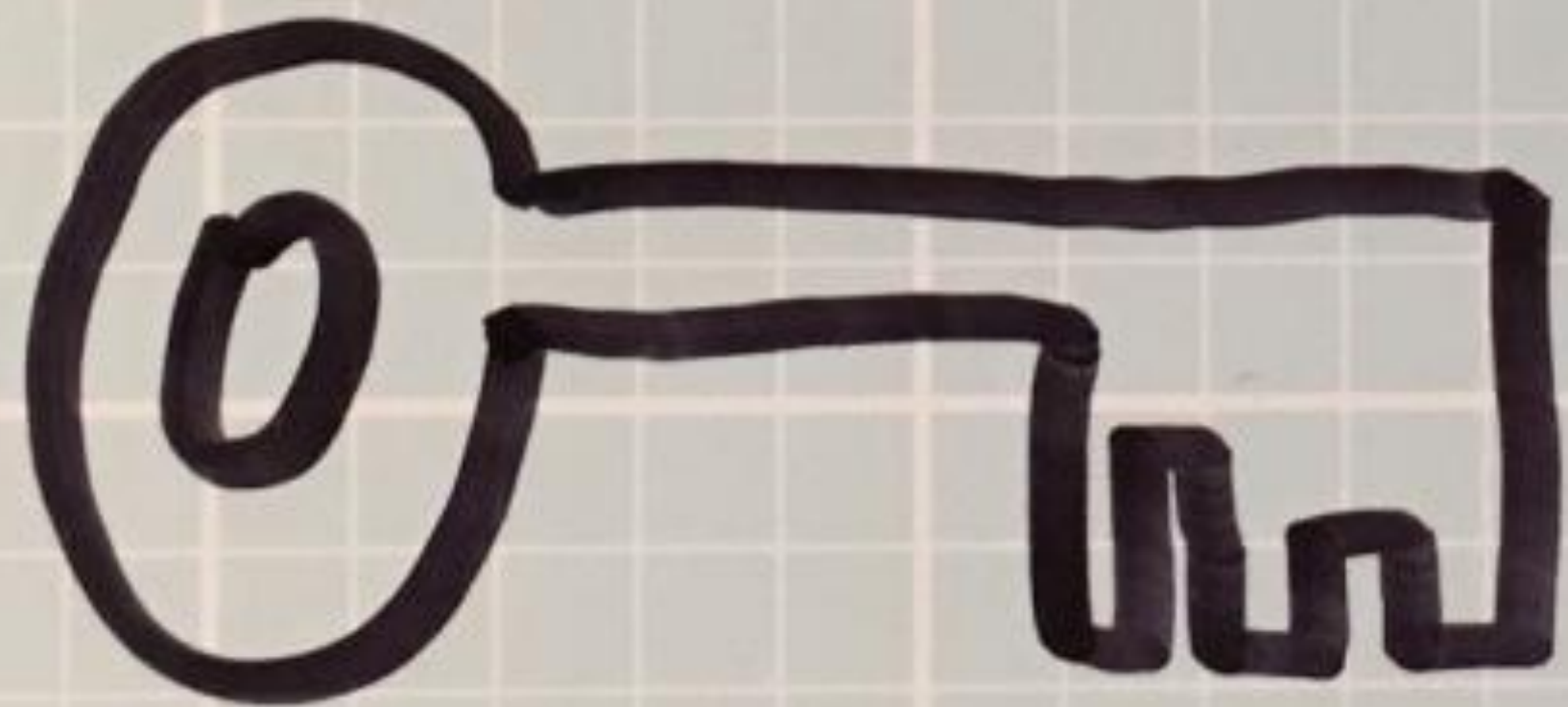
\$ € £ ¥ ₪



Launch

Scale

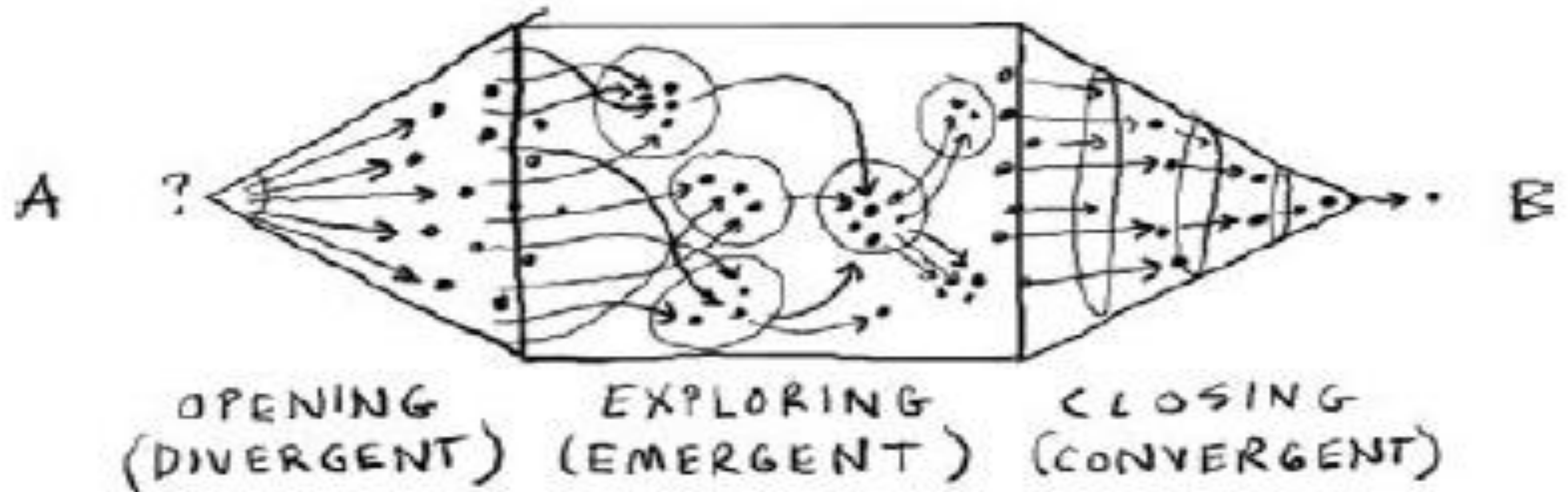
The missing part is
usually validating value



Tip:

stage investments

based on learning



Source: Gamestorming by Dave Gray, Sunni Brown & James Macanufo

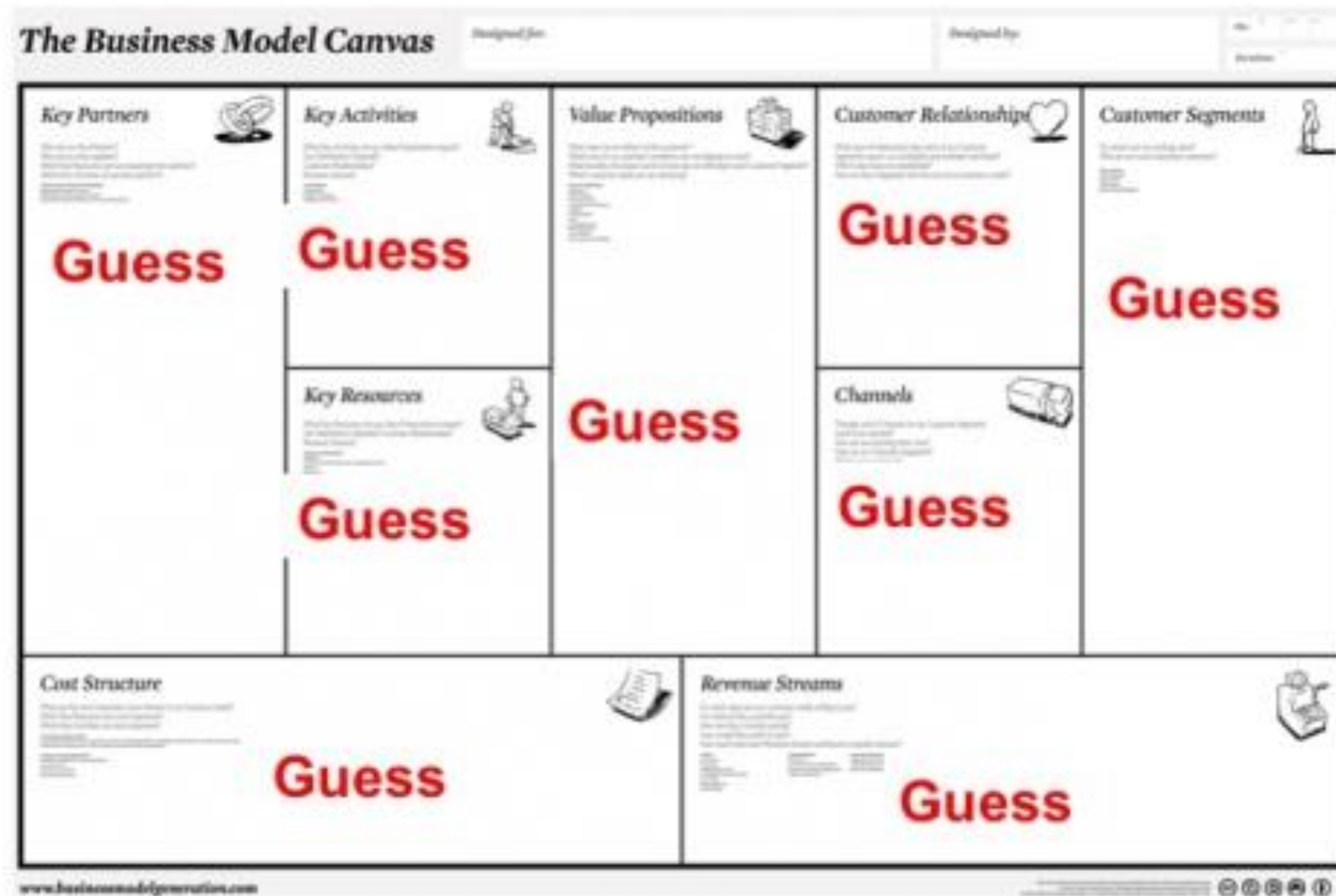
<p>KEY PARTNERS</p> <p>Who are our key partners? Who are our key suppliers? Which key resources are we acquiring from our partners? Which key activities do partners perform?</p>	<p>KEY ACTIVITIES</p> <p>What key activities do our value propositions require? Our distribution channels? Customer relationships? Revenue streams?</p>	<p>VALUE PROPOSITIONS</p> <p>What value do we deliver to the customer? Which one of our customers' problems are we helping to solve? What bundles of products and services are we offering to each segment? Which customer needs are we satisfying? What is the minimum viable product?</p>	<p>CUSTOMER RELATIONSHIPS</p> <p>How do we get, keep, and grow customers? Which customer relationships have we established? How are they integrated with the rest of our business model? How costly are they?</p>	<p>CUSTOMER SEGMENTS</p> <p>For whom are we creating value? Who are our most important customers? What are the customer archetypes?</p>
<p>COST STRUCTURE</p> <p>What are the most important costs inherent to our business model? Which key resources are most expensive? Which key activities are most expensive?</p>	<p>REVENUE STREAMS</p> <p>For what value are our customers really willing to pay? For what do they currently pay? What is the revenue model? What are the pricing tactics?</p>	<p>KEY RESOURCES</p> <p>What key resources do our value propositions require? Our distribution channels? Customer relationships? Revenue streams?</p>	<p>CHANNELS</p> <p>Through which channels do our customer segments want to be reached? How do other companies reach them now? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p>	

SOURCE WWW.BUSINESSMODELGENERATION.COM/CANVAS. CANVAS CONCEPT DEVELOPED BY ALEXANDER OSTERWALDER AND YVES PIGNEUR.

Business Model Testing

The data suggests that each of these guesses has about a 30% chance of being right.

So what are the odds that you the first time you work out your business model it's perfect?



“Conversations are the smallest units of change.”



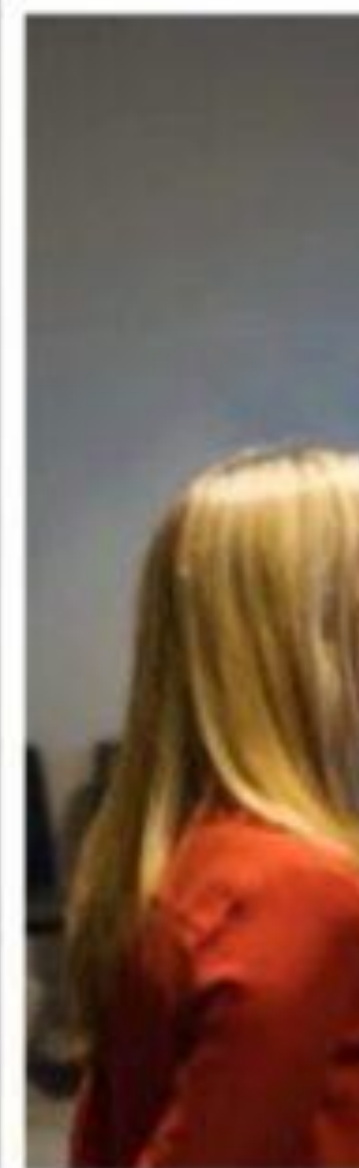
“Conversations are the smallest units of change.” — anonymous (Painting: The Conversation (1935), by Arnold Borisovich Lakhovsky)



“Conversations are the smallest units of change.”



"Conversations are the smallest units of change." — anonymous (Painting: The Conversation (1935), by Arnold Borisovich Lakhovsky)



**INTROVERTED
BUT
WILLING
TO
DISCUSS
BIRDS**



New Cat Bed



Box it Came In



Build empathy

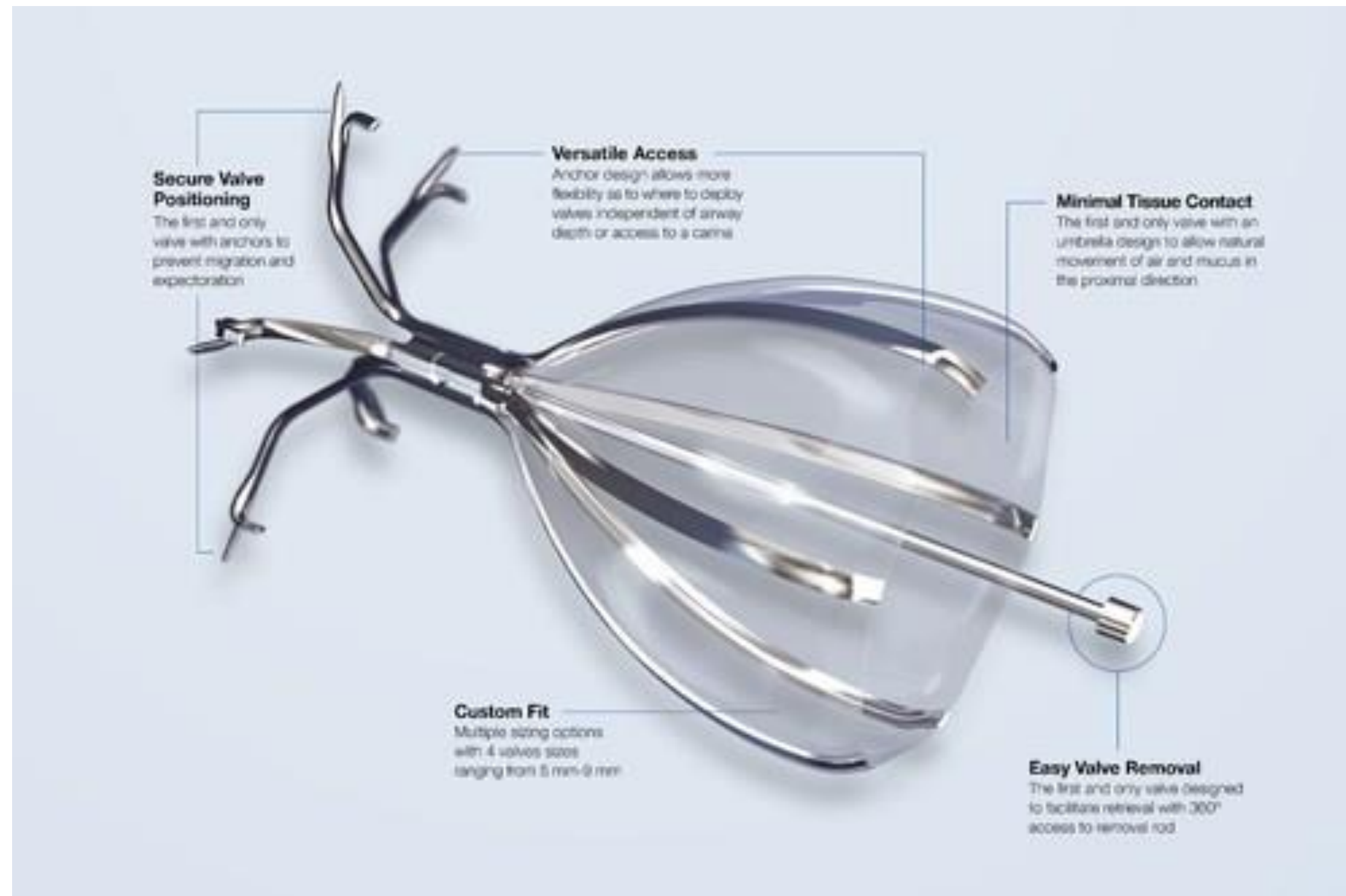
“Empathy is a noun—a thing. Empathy is an understanding you develop about another person. Empathizing is the use of that understanding—an action. Empathy is built through the willingness to take time to discover the deep-down thoughts and reactions that make another person tick. It is purposely setting out to comprehend another person’s cognitive and emotional states. Empathy then gives you the ability to try on that person’s perspective—to think and react as she might in a given scenario.

This use of empathy is what most people confuse with empathy itself. People try to act empathetic—to take someone’s perspective, to walk in his shoes—without first taking time to develop empathy. This leap is problematic when it comes to your work. You end up with business decisions based on expectations about how others are reasoning, not based on knowledge.”



Indi Young – Practical Empathy

Complexity in Value Propositions



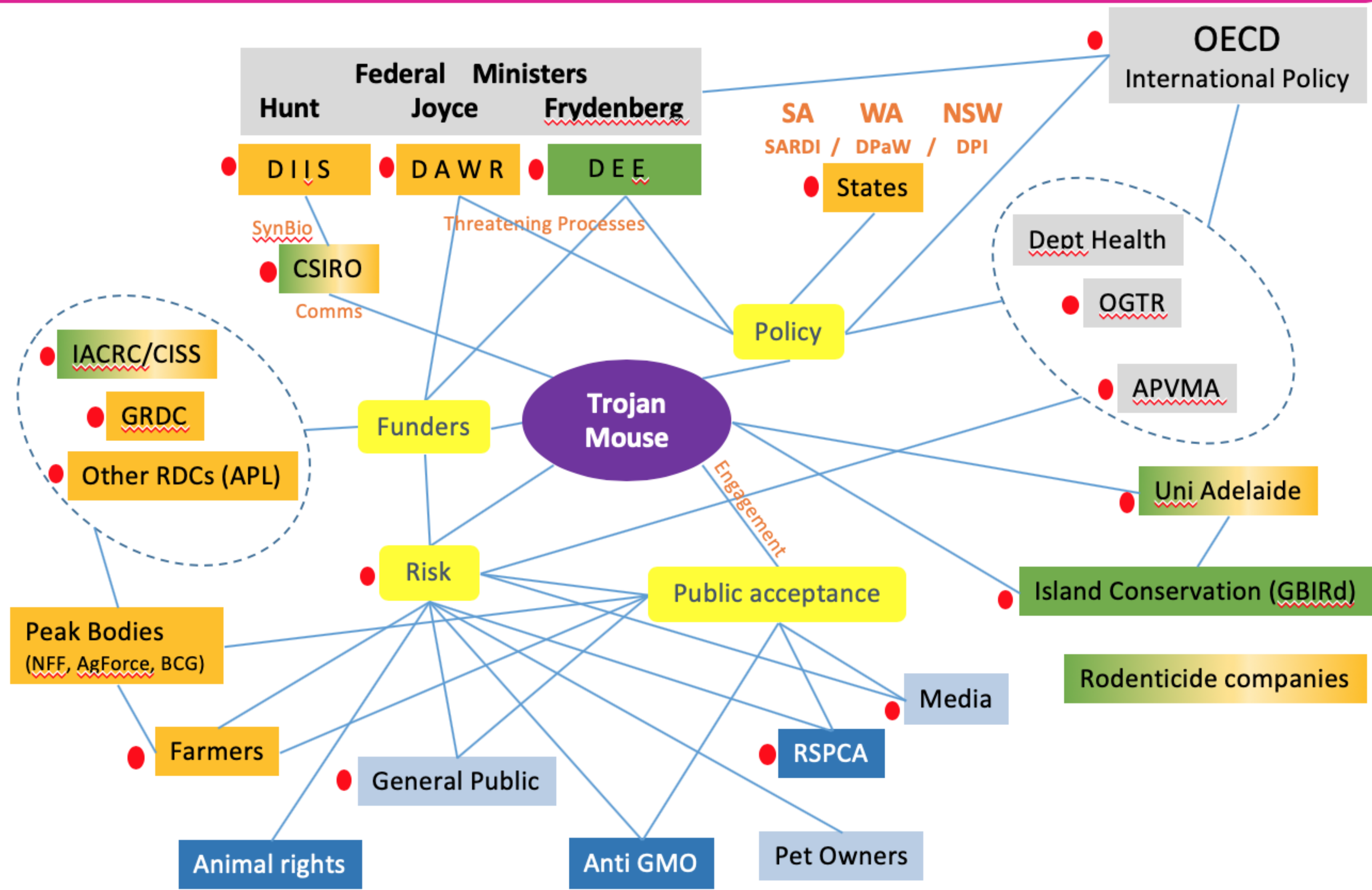
How many value propositions does this require in order to be successful?

Device to treat Emphysema

More on Stakeholders

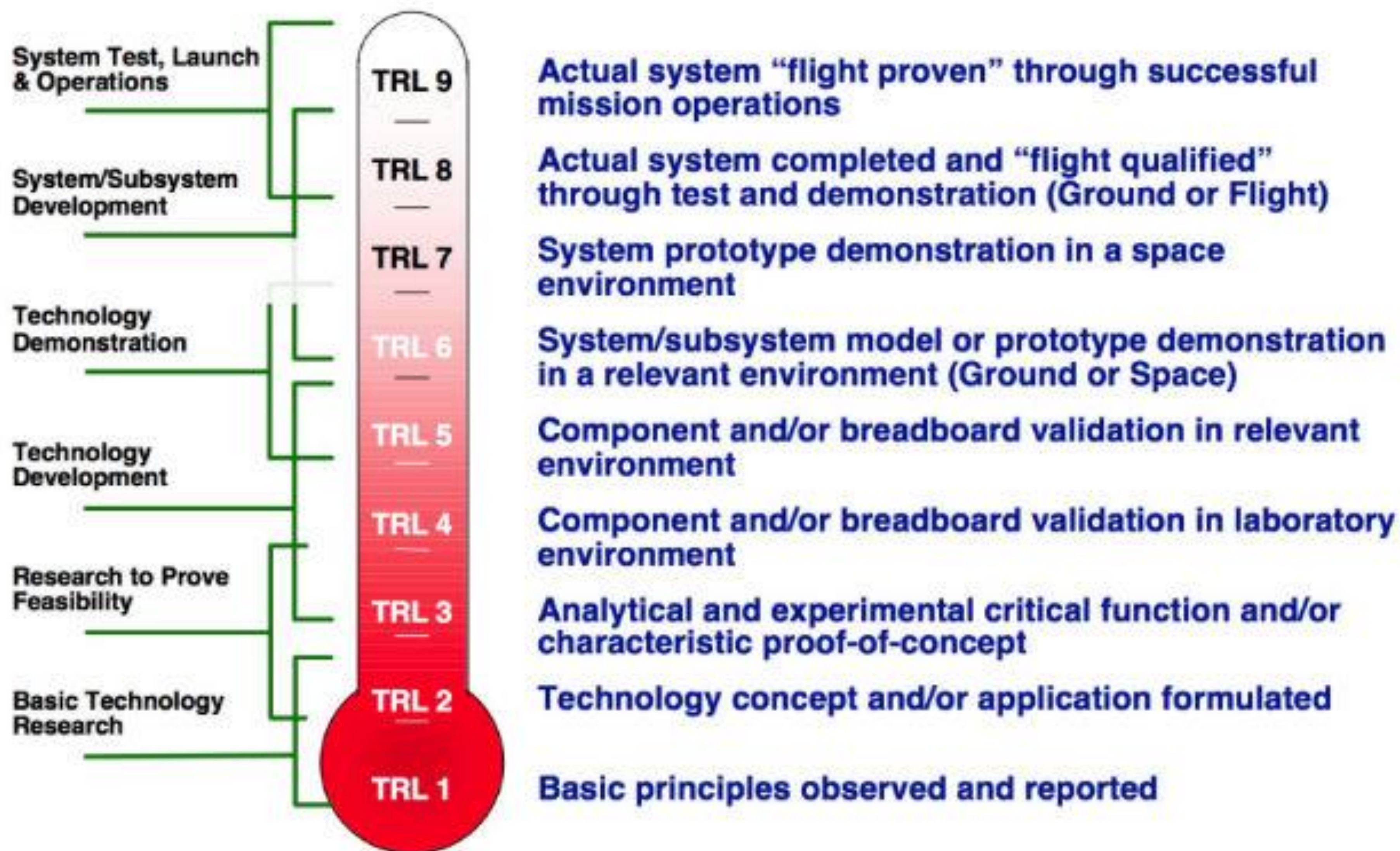
- Transgenic mice – reduce mouse plagues in Central Australia
- Original business model: sell the transgenic mice to farmers that suffer from mouse plagues
- But actually...

What we have learned: Trojan Mouse “lives” in a complex environment

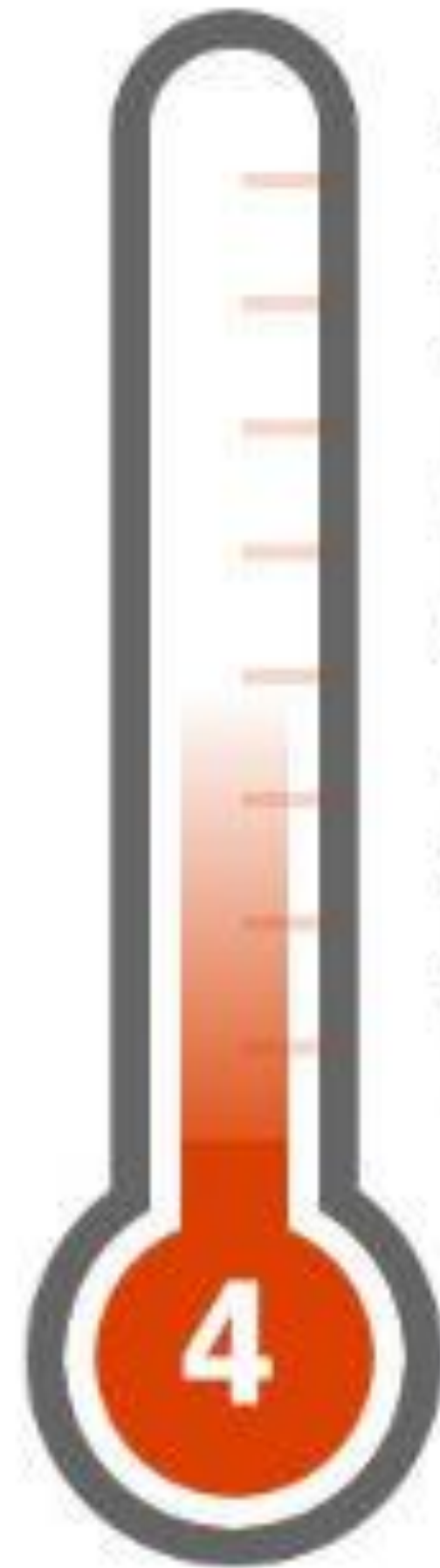




NASA/DOD **Technology** Readiness Level

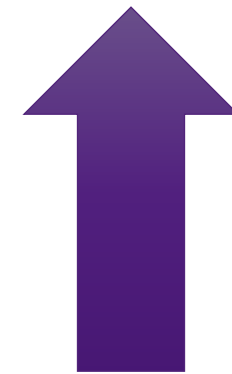


Investment Readiness Level

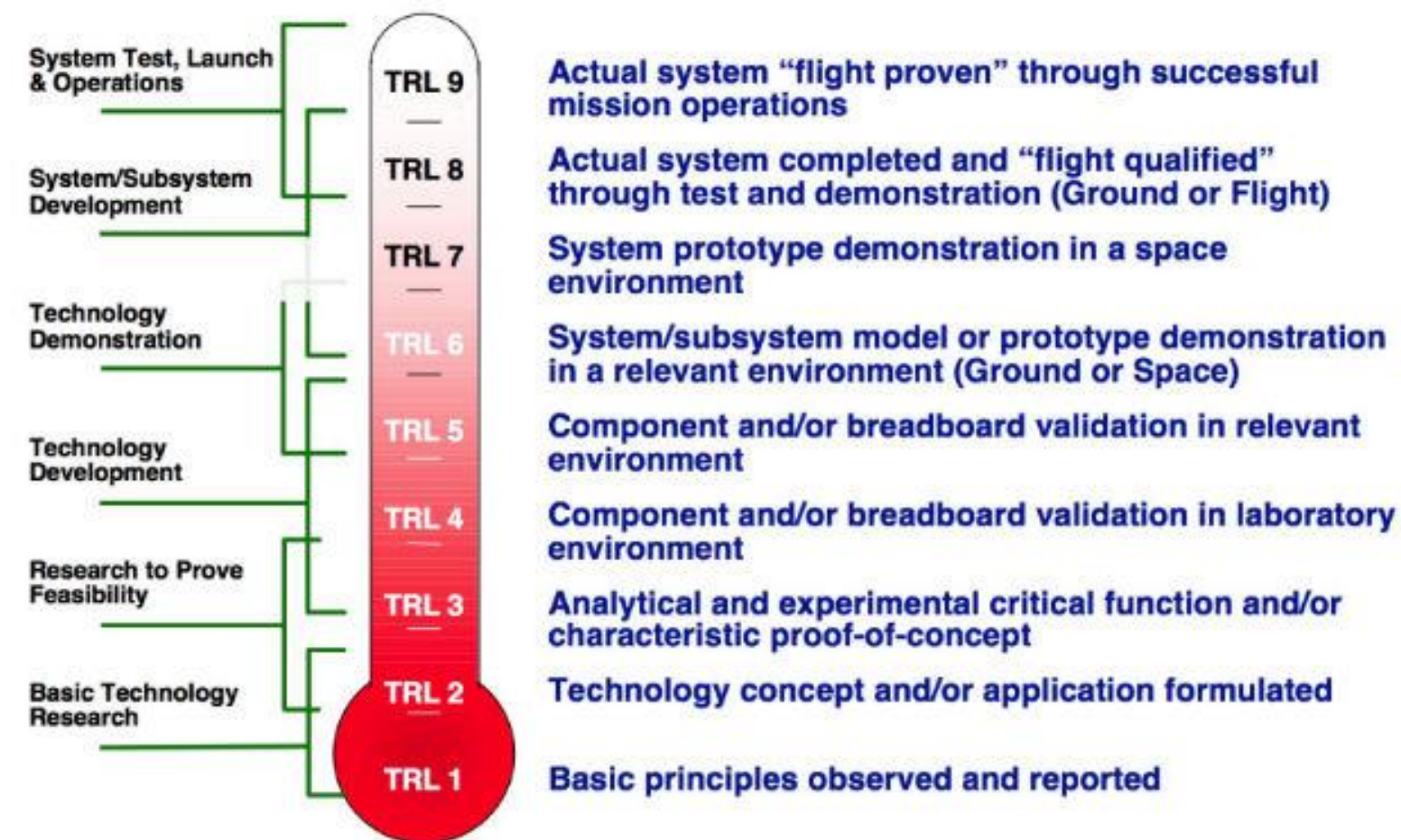


9. Validate Metrics That Matter
8. Validate Left Side of Canvas
7. Prototype High Fidelity MVP
6. Validate Right Side of Canvas
5. Validate Product/Market Fit
4. Prototype Low Fidelity MVP
3. Problem/Solution Validation
2. Mkt Size/Competitive Analysis
1. Complete First-Pass Canvas

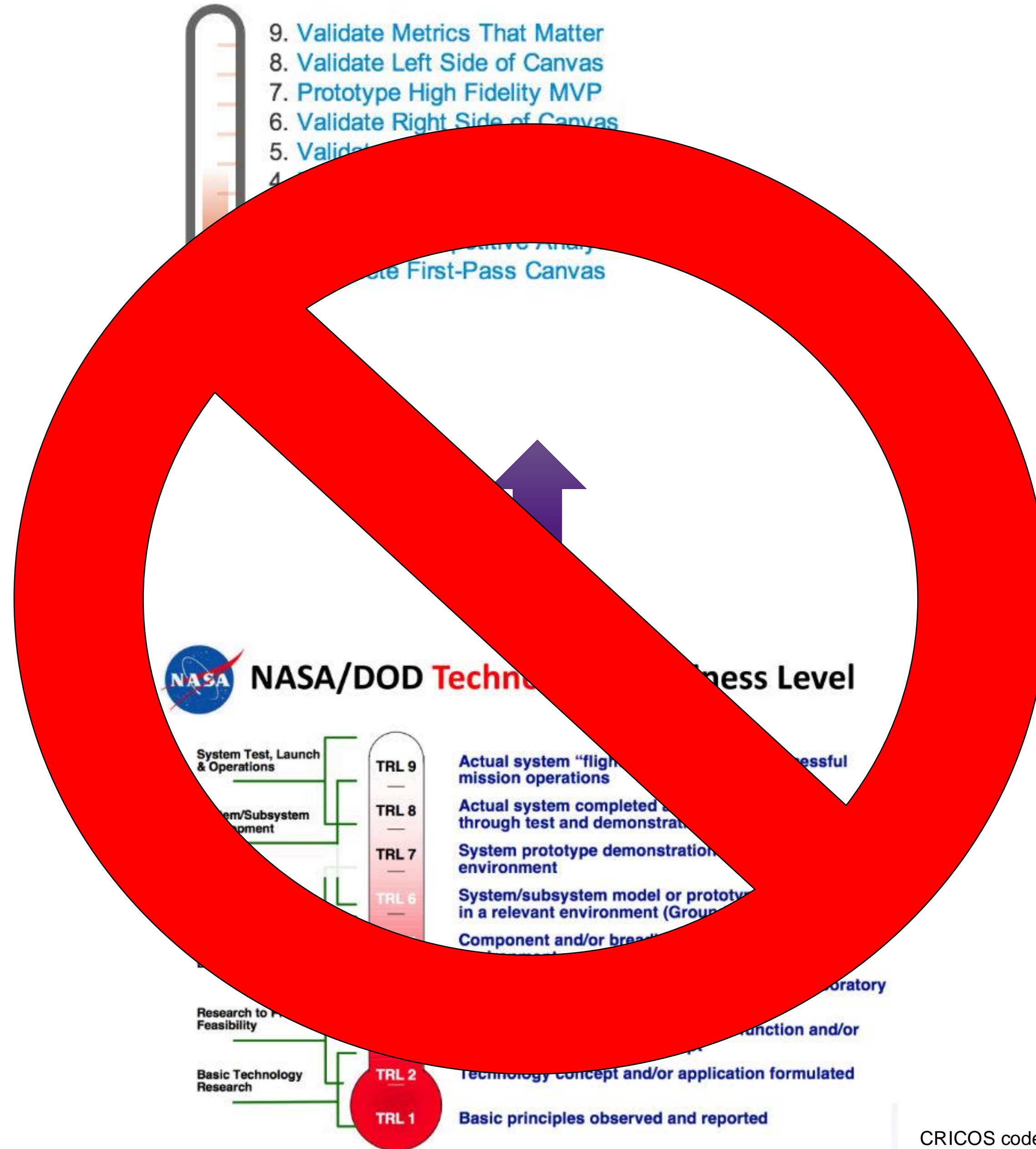
Investment Readiness Level



NASA/DOD **Technology** Readiness Level



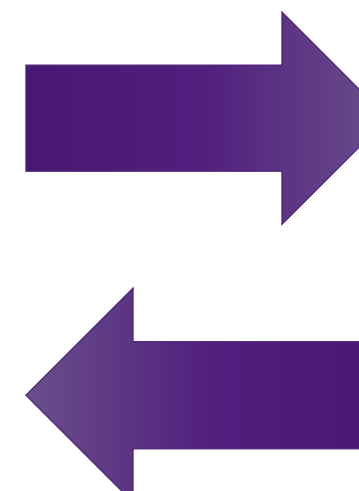
Investment Readiness Level



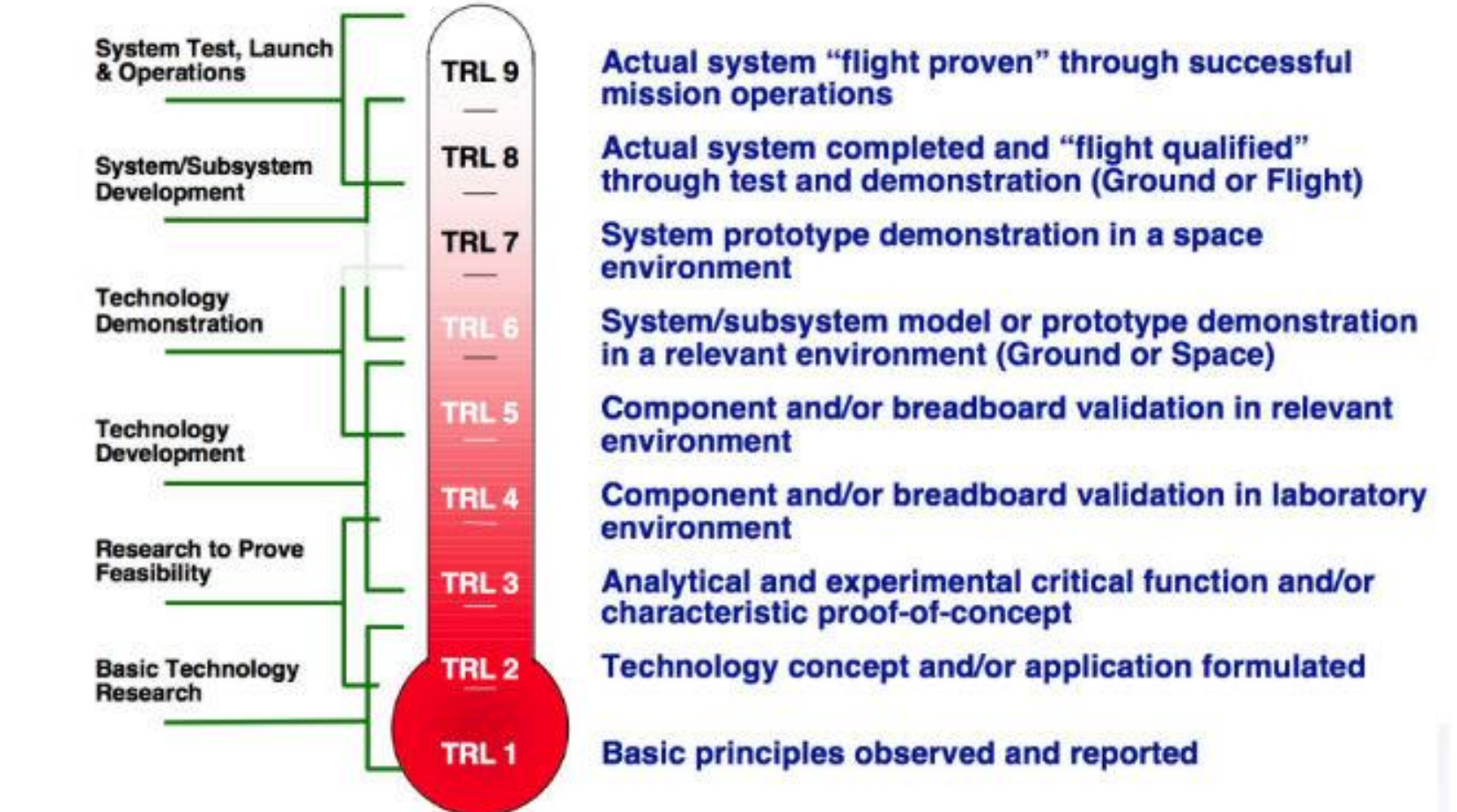
Investment Readiness Level



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NASA/DOD Technology Readiness Level

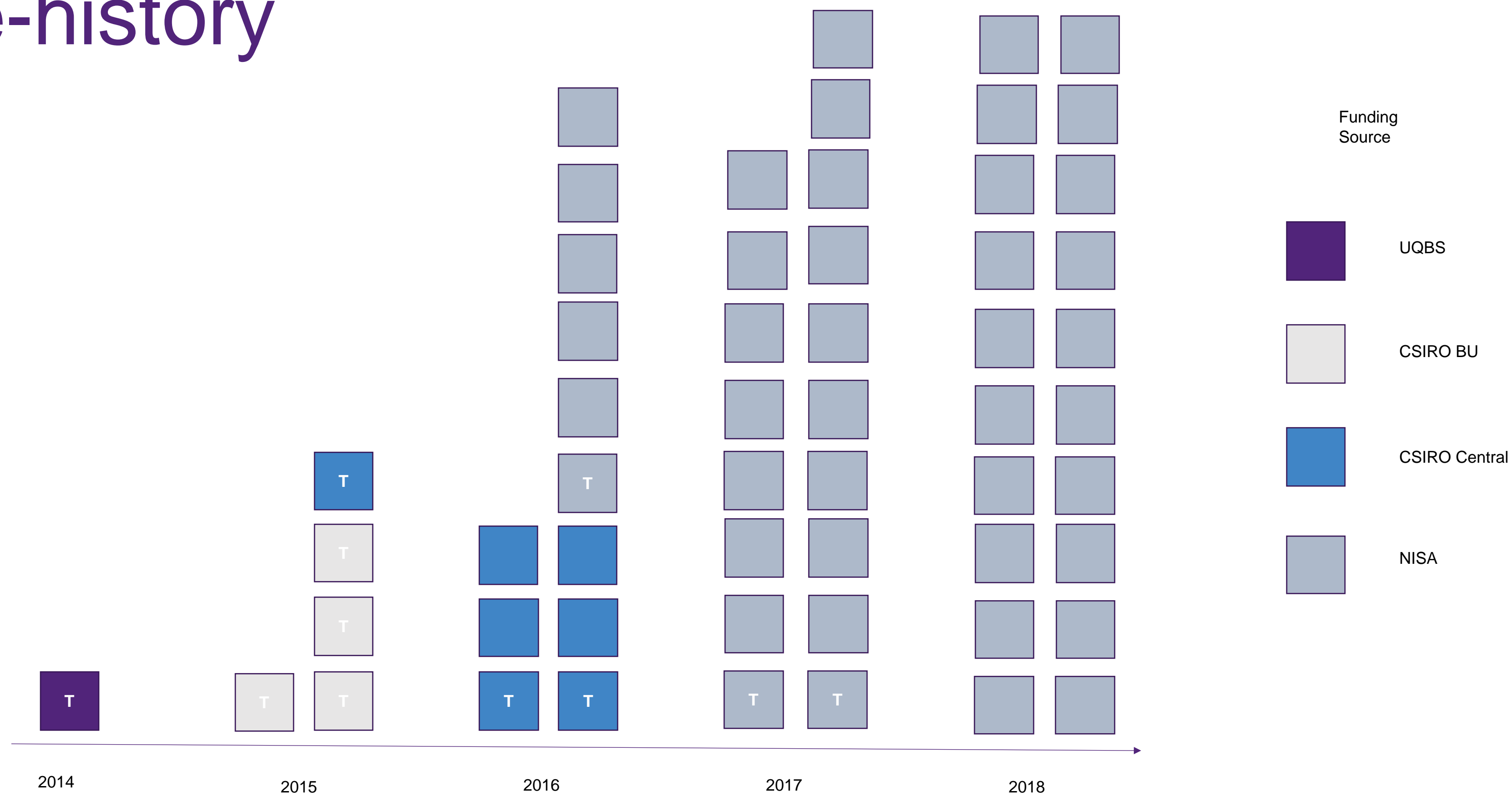


Investing in Business
Models J. increases your
odds of success

New Products: | Startups: | Patents

18% → 40%+ | 9% → 20%+ | 2% → 10%+

ON Pre-history



Tracking progress against IRL

IRL 1 Complete First-Pass BMC	IRL 2 Market Size/ Competitive Analysis	IRL 3 Problem/ Solution Validation	IRL 4 Prototype Low- Fidelity MVP	IRL 5 Validate Product/Market Fit	IRL 6 Validate Revenue Model	IRL 7 Prototype High- Fidelity MVP	IRL 8 Validate Value Delivery	IRL 9 Identify and Validate Metrics that Matter
BMC filled in	Detailed map of total addressable market	At least one potential market segment invalidated	Market hypotheses and tests developed to guide learning from MVP	Map of customer ecosystem and flow	Map money flow	Market hypotheses and tests developed to guide learning from MVP	Partnership ecosystem mapped	Key growth metrics identified
Describe assumptions that must be true for each entry into the BMC	Sub-sections of the market	First target segment identified (60-100 interviews)	MVP is built (sample data, financial model etc)	Get-Keep-Grow loop outlined	Revenue model validated (20+ interviews)	Actual market-based prototype is built	Funding and growth model built	Measurement system in place
Outline how each assumption will be tested & measured, and how success will be identified (Test Card)	First niche we will address (in terms of \$ we can earn, not total value of each segment)	Customer problem validated (60-100 interviews)	Prototype solution validated (20+ interviews)	Market channels and customer relationships validated (20+ interviews)		Prototype solution validated (20+ interviews)	IP requirements identified and secured	Some customer acquired (may happen in IRL 6)
	Competitor map (Petal Diagram)	Solution validated (60-100 interviews to do this)					Assumptions in the left four blocks are tested/validated (30+ interviews)	Idea ready for launch/sale/license etc

Outcomes

Started with 6 team pilot in 2014, expanded to 6 cohorts in 2015, expanded nationally in 2016

Over 700 teams have gone through about 80 cohorts

That's nearly 50,000 new conversations!

Now embedded across Australia – open to all researchers at CSIRO and Australian Universities

Average 1.5 business model pivots per project

Measured corporate change within CSIRO

Spin-out rate has increased 8X (>60 spin-outs and counting), funding rate has increased 1.5X, average funding amount has increased 2X

New Cat Bed



Box it Came In





Thank you!

Tim Kastle

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<http://timkastelle.org/theblog/>