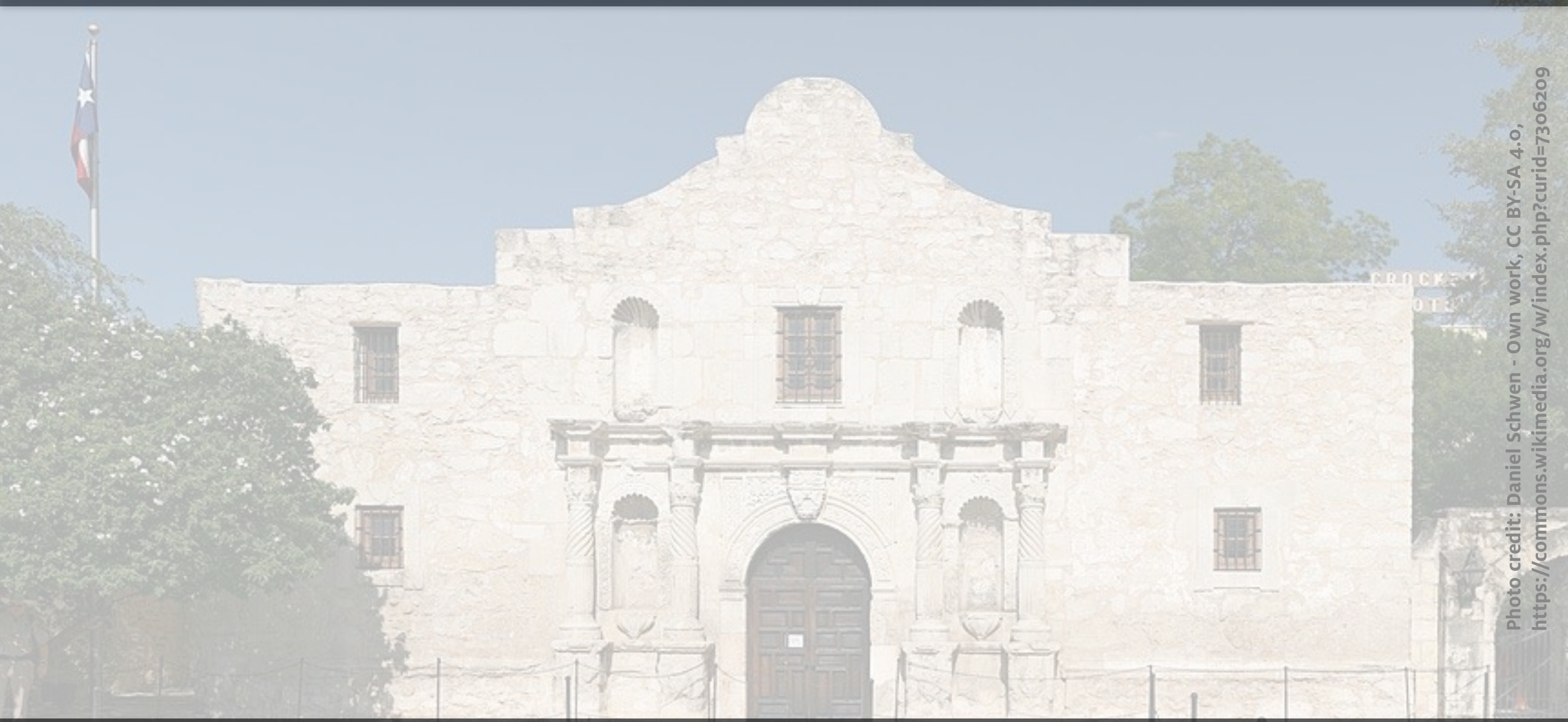
Building and Supporting a University Spinout Ecosystem

#aiInnovation



San Antonio, 30-31 July 2018

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Support Programs for Spinouts

Stephen Fleming
Vice President, University of Arizona

Monday, July 30, 2018 • 3:00–4:15 p.m.

Agenda

Startup Myths

Business Model Canvas

Lessons from Silicon Valley

University Strategies

Questions & Answers

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Startups… the Myth

Startups… the Myth

Startups Are a Team Sport

Startups… the Myth

Startups… the Myth

Startups Are Happening Everywhere!

Economist.com

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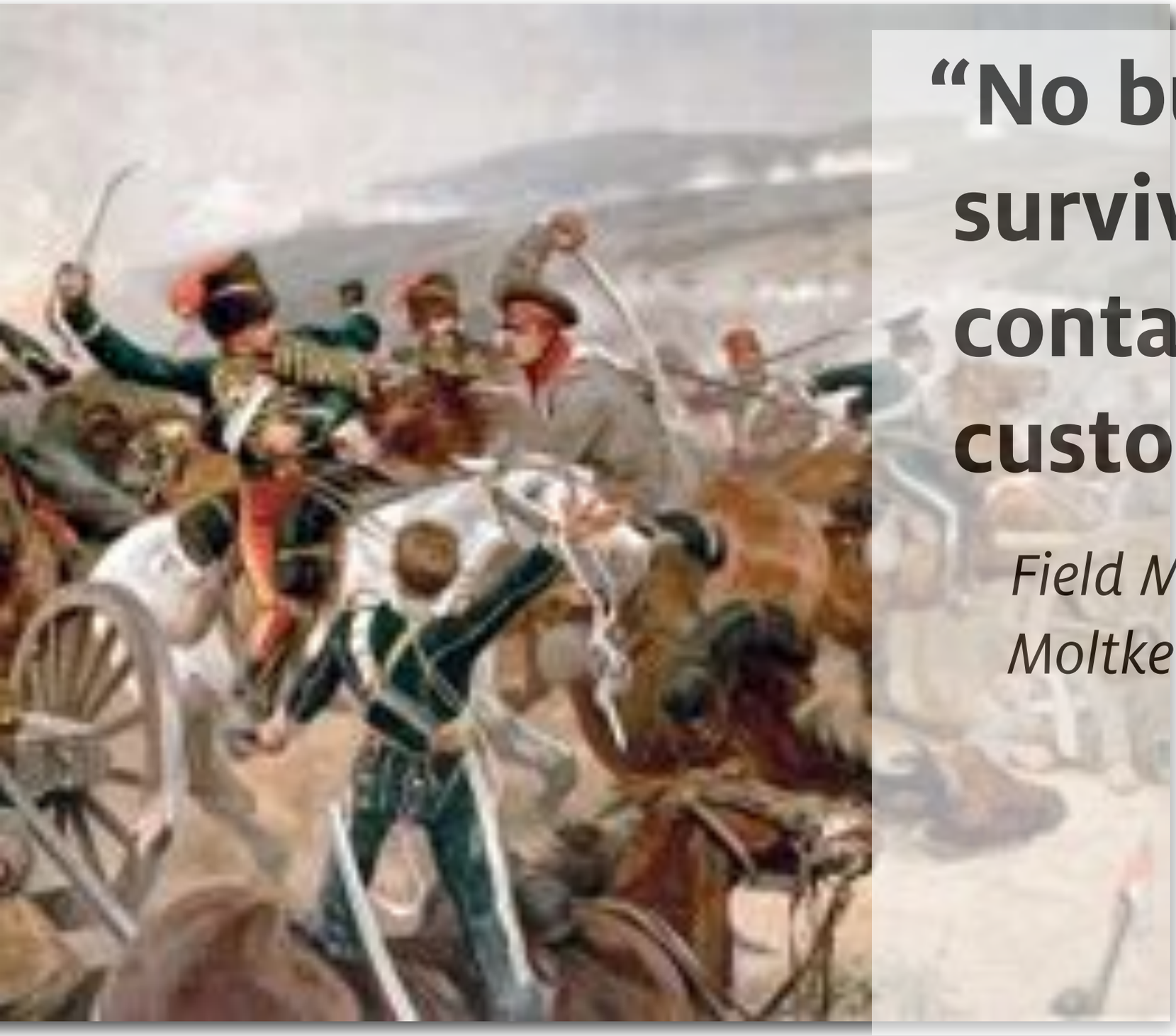
Business Plans



"No business plan survives first contact with the customer."

Field Marshal Helmuth von Moltke (slightly modified!

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Business Plans

"A good plan violently executed now is better than a perfect plan executed next week."

—*Gen. George Patton*

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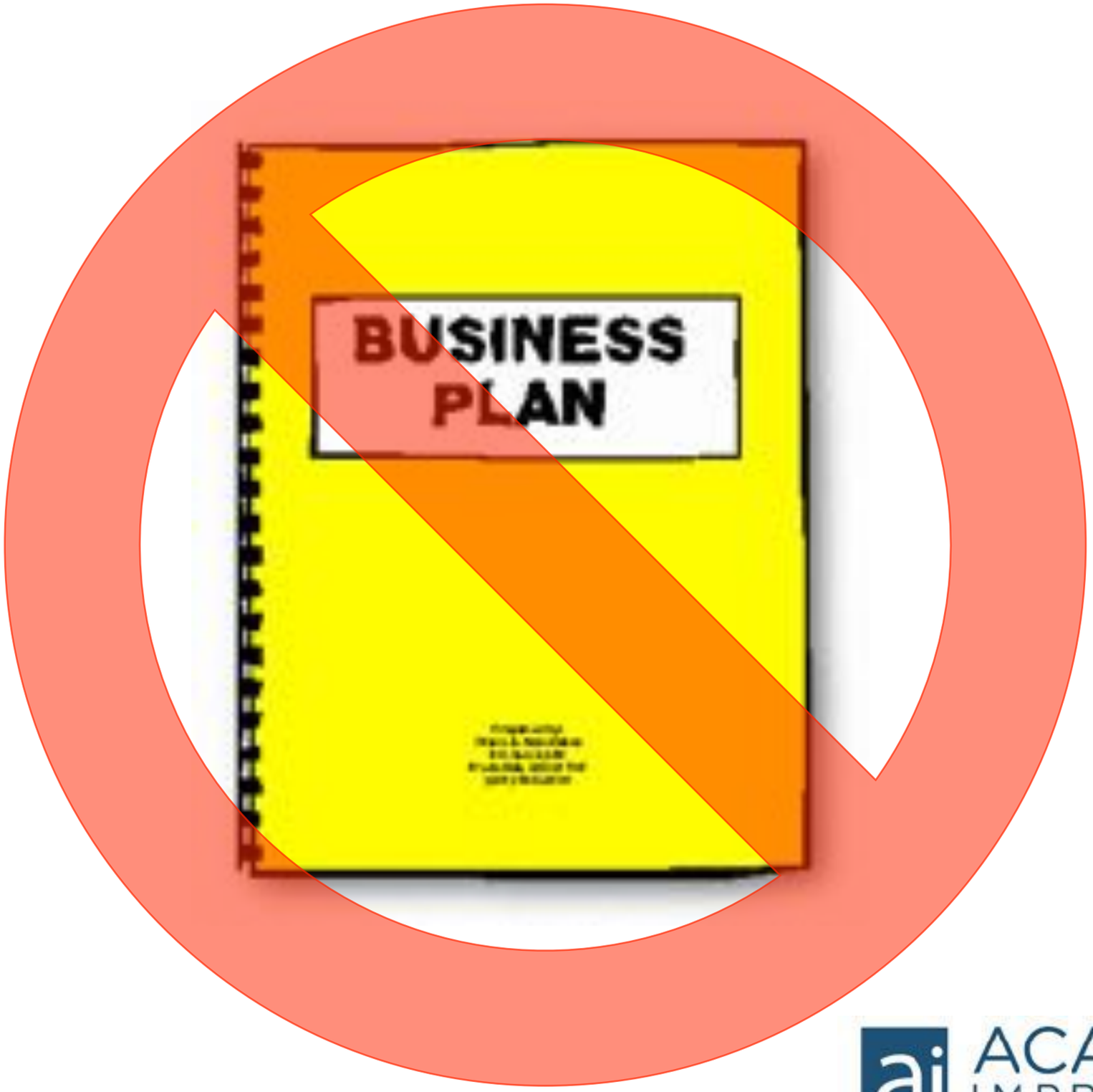
Model ≠ Plan



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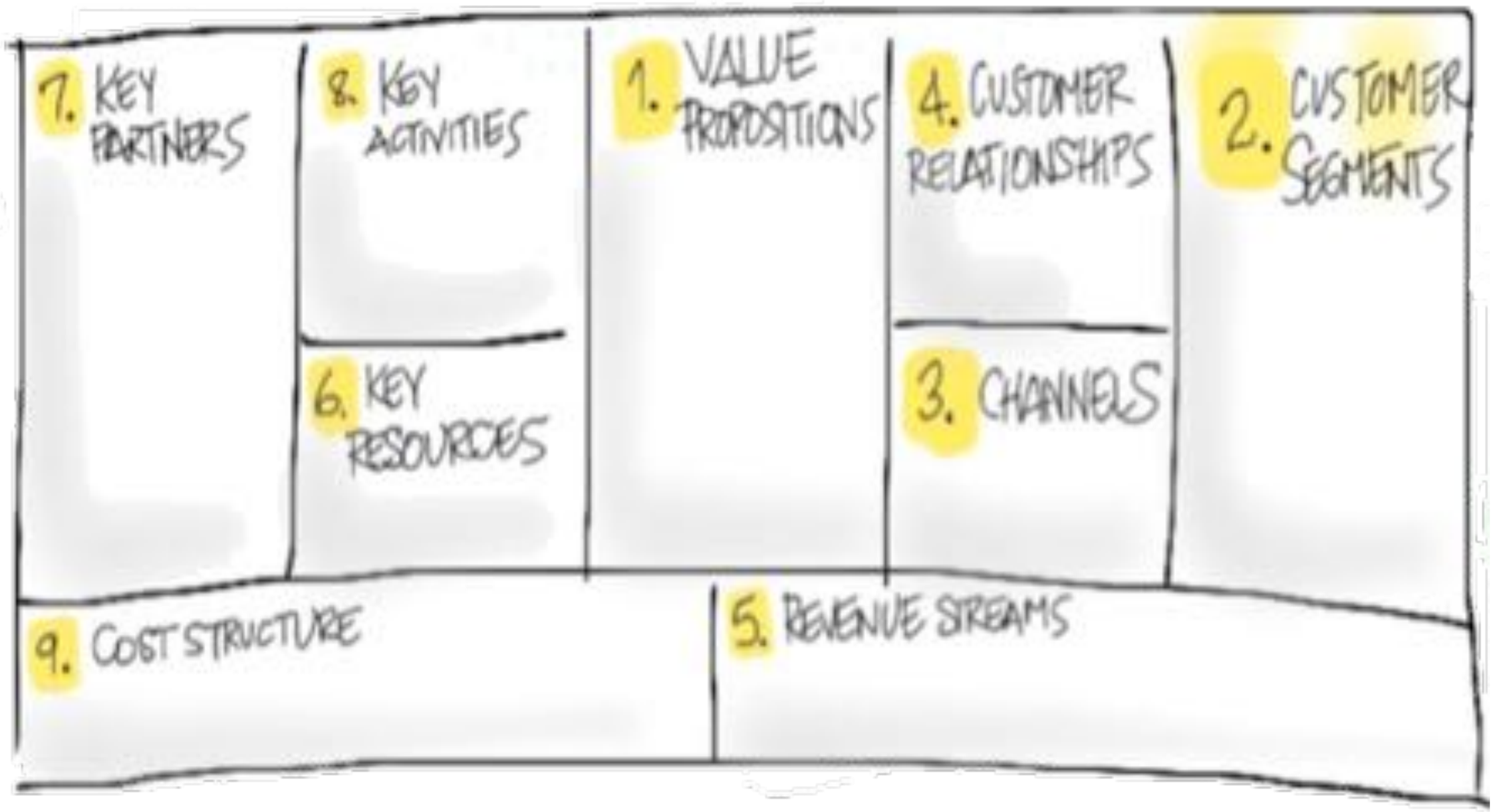
Business Model Canvas



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Business Model Canvas

Adapted from *Business Model Generation* by Alexander Osterwalder and Yves Pigneur

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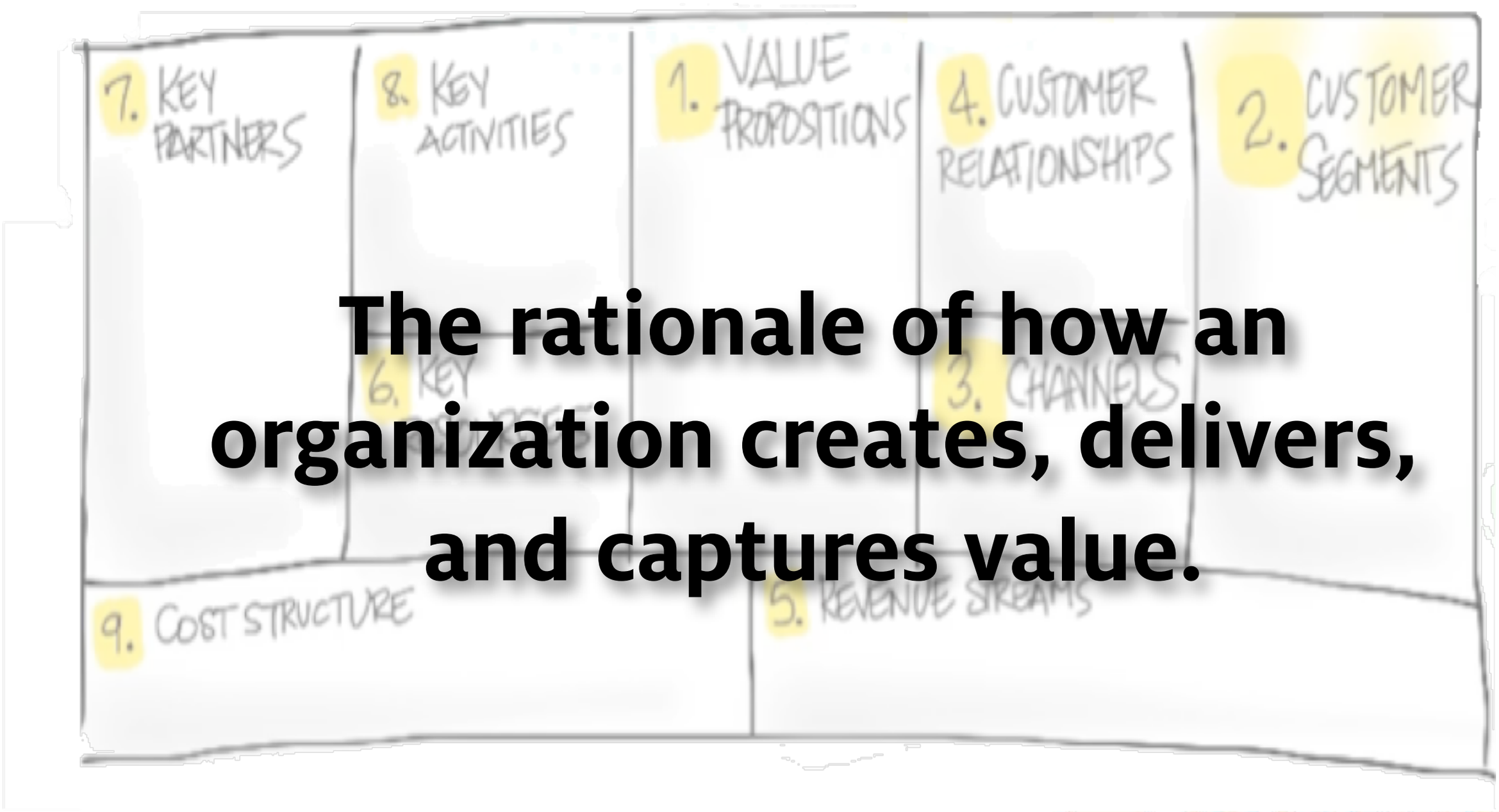
Business Model Canvas



The rationale of how an organization creates, delivers, and captures value.

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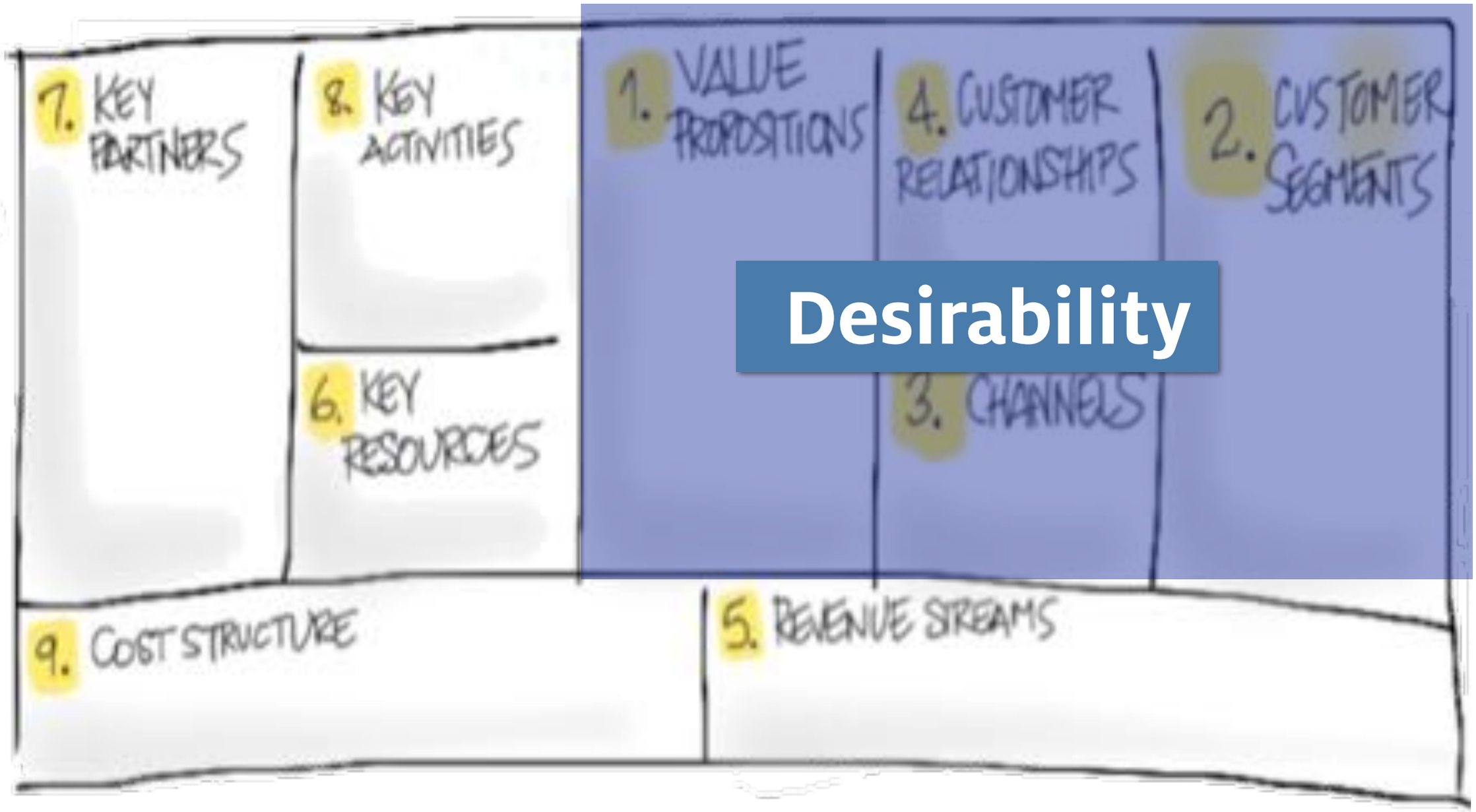
Structure of the Canvas



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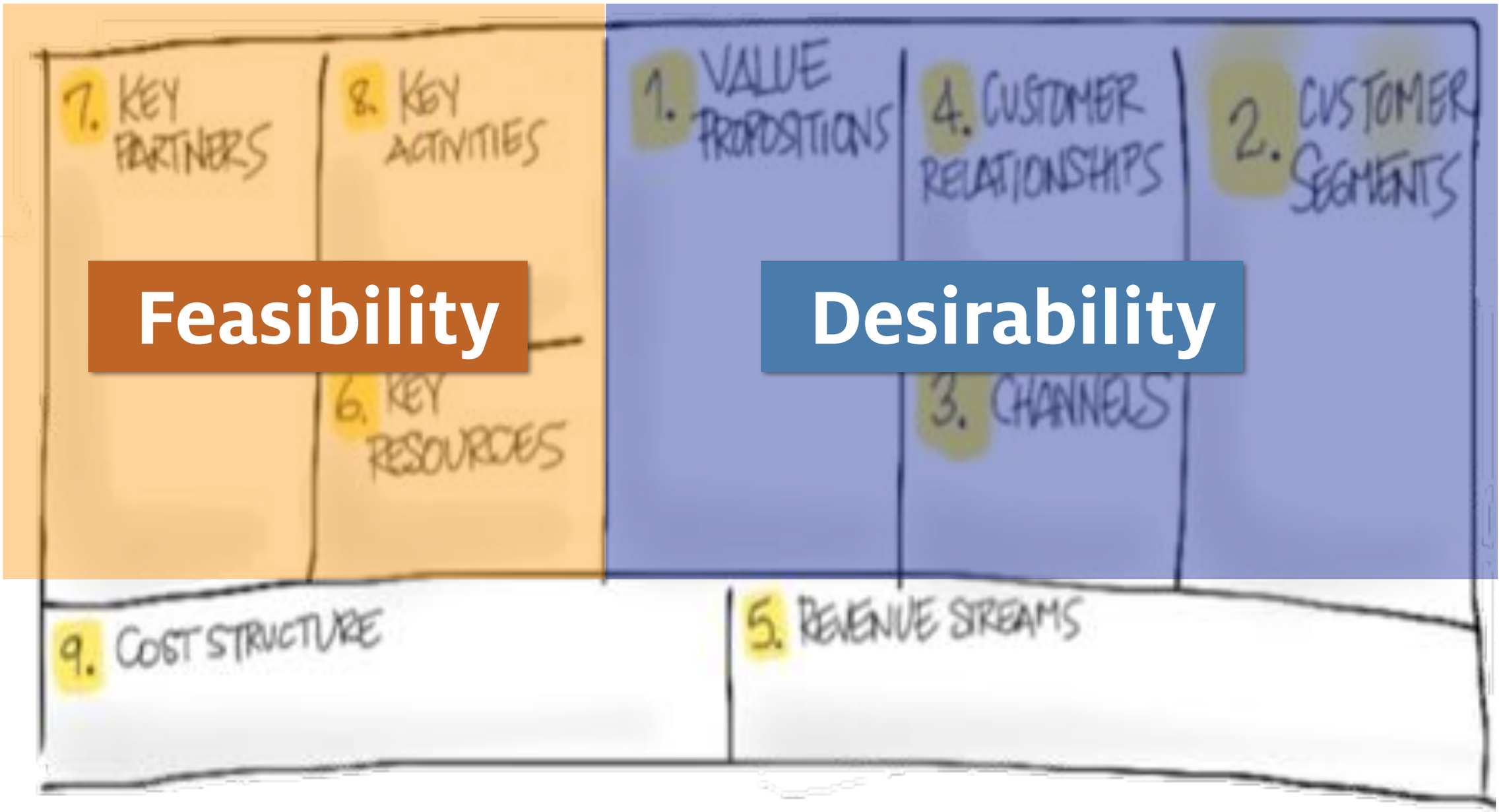

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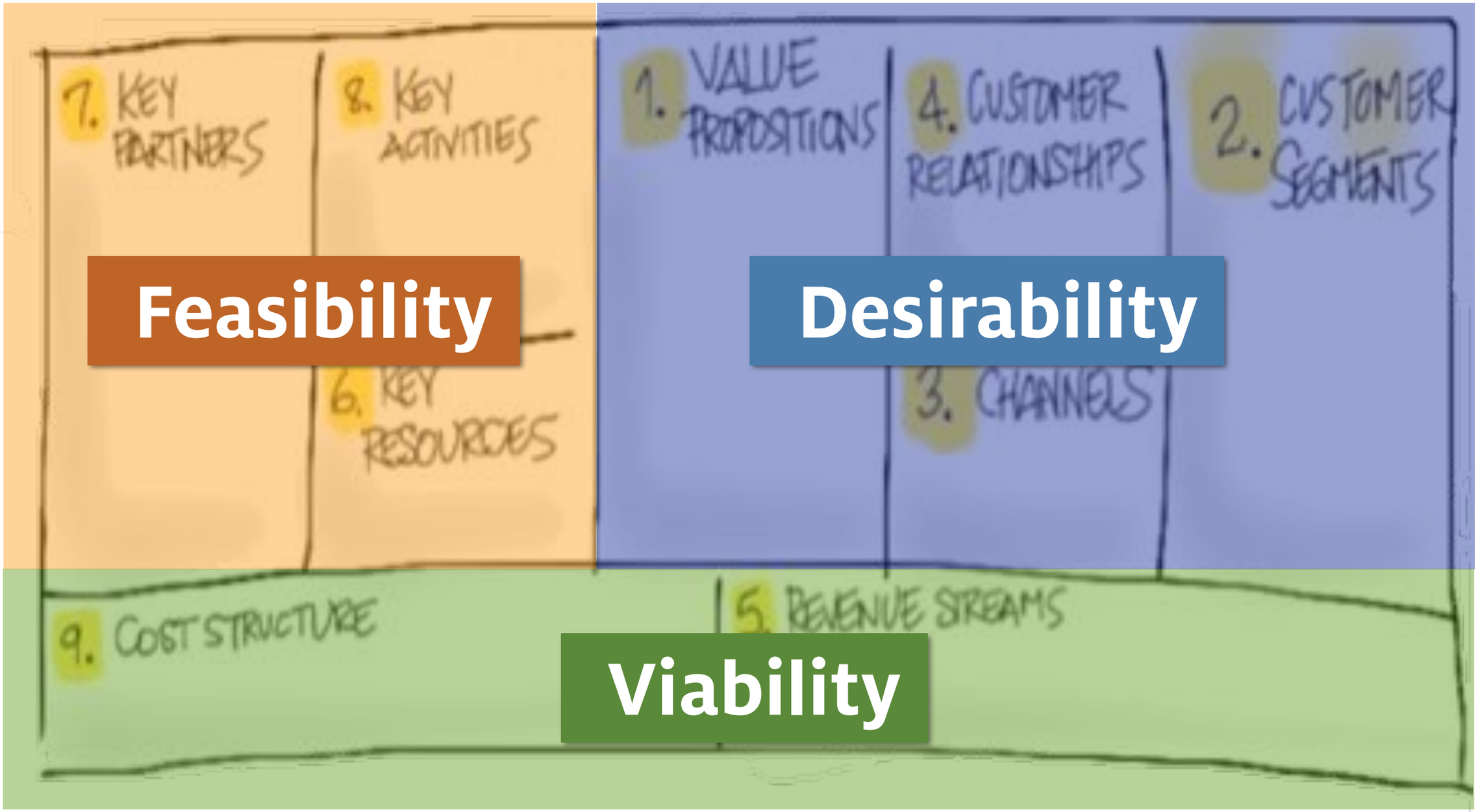

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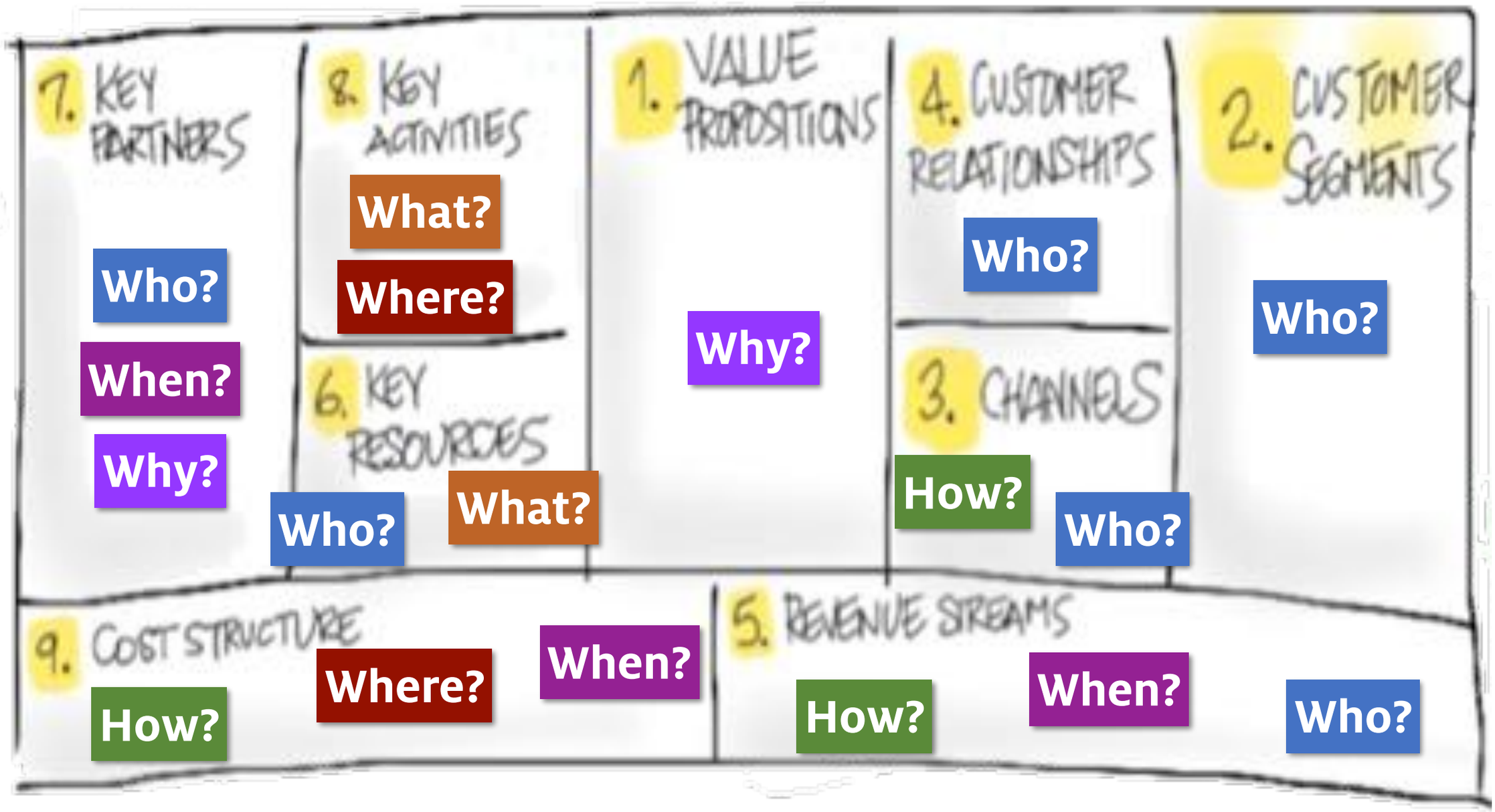
Lean Startups and the Canvas

Managing *(or investing)* in a lean startup model shares a lot of questions with basic journalism.

The Canvas is a Place for Answers



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What Worked in the Valley?

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What Worked in the Valley?

H-P's iconic birthplace.

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We're Not in the Valley

Economist.com

What Worked in the Valley?

Free **markets**

Availability of **capital**

Intellectual property protection

Collaborative **culture** & social networks

Flexible **career paths**

Welcoming to **outsiders & immigrants**

Meritocratic advancement

Acceptance of **failure** as learning experience

Continuous **replenishment**

- Of bright young **people**
- Of interesting new **technologies**

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Does This Really Work Elsewhere?

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University Strategies

Internal Education

Incubation/Acceleration

Use of Facilities

Conflict of Interest/Commitment

Licensing Terms

Patent Costs

Grant Programs

Equity Funding

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Internal Education

Georgia Tech GT:IPS program teaches faculty, research staff, and grad students:

Making an elevator pitch

Developing a business plan

Constructing a management team

SBIR/STTRs

Fundraising via the equity markets or

Anatomy of a license

Patent primer

Legal aspects of agreements *(e.g., consulting, non-competes, proprietary information, employees, shareholders)*

Conflict of interest

Conflict of commitment

Use of campus resources

...and more.

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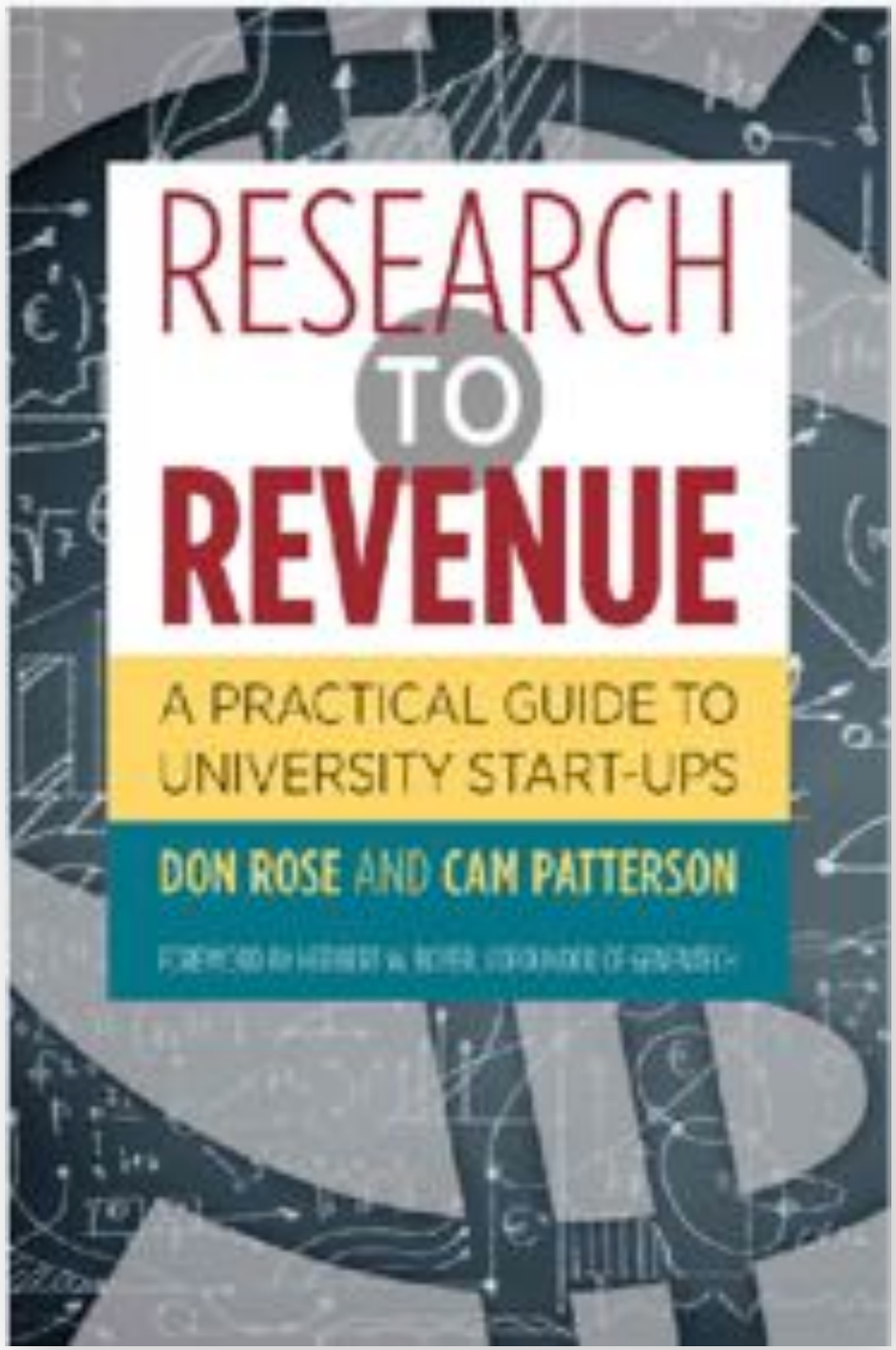
Internal Education



"A university with a large number of faculty with positive entrepreneurial experiences will greatly influence faculty who are considering a start-up for the first time."

—Don Rose, "Research to Revenue," 2016

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Incubation/Acceleration

Spinouts occur with or without incubation/acceleration assistance…

- *But* the success rate is much higher when they take advantage of assistance programs!

On-campus or off-campus

- Physical space
- Coaching and connection programs
- More detail in tomorrow's lecture.

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Use of Facilities

Conflict of Interest/Commitment

Universities have developed policies to protect faculty from conflicts:

Conflict of Interest

- Financial conflicts
- Supervision of graduate students
- Clinical trials

Conflict of Commitment

- Time allocation between university duties and spinout company

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Image via Good Free Photos

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Sunlight is the best disinfectant

Conflict of Commitment

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Image via Good Free Photos

Licensing Terms: Tradeoffs

Upfront fees	Early recovery of part or all the cost of patent protection.
Milestone payments	Predetermined triggers as the IP increases in value.
Royalties	Typically << 10% of sales. May be on sliding scale or other adjustment basis.
Equity	Signals best alignment of interest between university and spinout… *but* requires patience, may be worthless if the company fails.

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Patent Costs

Breadth of coverage	Initial cost (approx.)	Maintenance (approx.)
Provisional *(USA only, placeholder)*	free	Expires after one year
USA only	$15-25K	Maintenance fees averaging < $1000/year
USA plus PCT (Patent Cooperation Treaty): 3 European countries	$100-150K	$5000/year
USA plus PCT: 23 countries	$400-600K	$60,000/year

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Patent Costs

Spinouts typically don’t have the funds to pay patent costs, especially for broad international coverage.

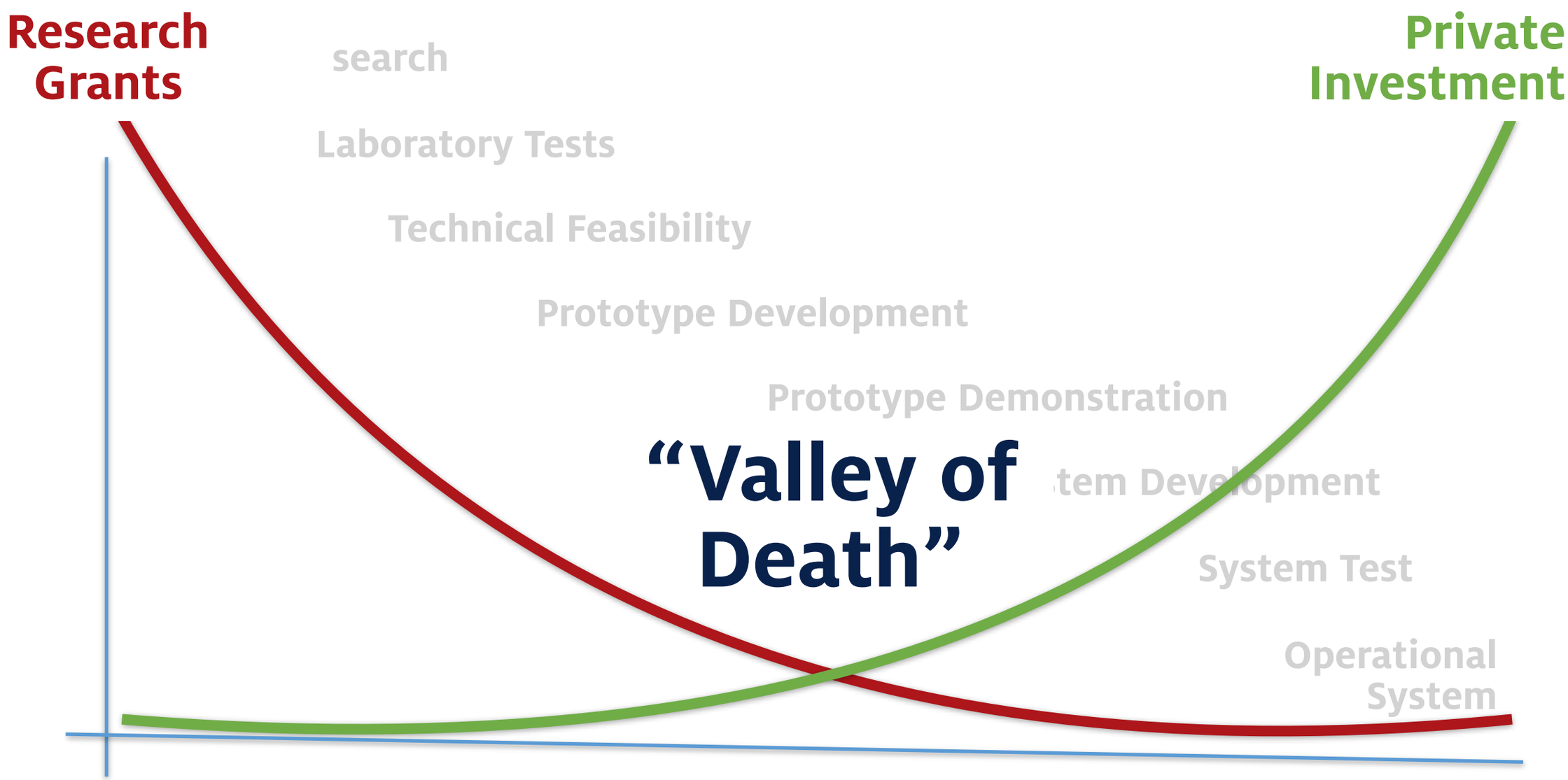
Critical for biotech and pharma work

University patent budgets are not infinite.

Difficult triage decisions, negotiations with founders, abandonment of some potential intellectual property.

University/State Grant Programs

Attempting to bridge the "Valley of Death"



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University/State Grant Programs

Can start with small dollar amounts.

- Typically $10K to $50K.

Multiple mechanisms for choosing projects:

- On-campus peer review.
- Off-campus industry/entrepreneur review.
- Lottery.
- New ideas *(Michigan MCubed, DOE crowdsourcing model, etc.)*.

University/State Grant Programs

Typically multiple phases:

- Increasing dollar amounts.
- Planned attrition at each stage.

Objective: demonstrate “proof of concept” to qualify for angel/VC/other funding.

- Can also be used as SBIR/STTR matching funds for patent costs, legal fees, consultants, market research, etc…

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Example: UA Asset Development Grants

- Funding to move inventions towards a license
  - Managed by TTO
  - Proof of concept, scalability test, commercial feasibility, etc.
- $1 million annual budget
- Awards average $30–50K, milestone driven
- Licensing manager serves as champion
- Oversight with review committee

Equity Funding

University-focused venture capital fund:

- May be internal or external.
- Much depends on university culture, as well as legal structure *(easier for private universities)*.

Especially popular in cities far from Boston or Silicon Valley.

Critical alignment: understand staakeholder financial objectives *before* making initial investments!

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Questions

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Thank You!

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Stephen Fleming

Vice President

Strategic Business Initiatives

University of Arizona

stephenfleming@email.arizona.edu

Phone (520) 621-3150

Twitter @stephenfleming

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