

Student's Innovation Mindset Journey

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TÉCNICO LISBOA

iStartLab

neelco

Why?

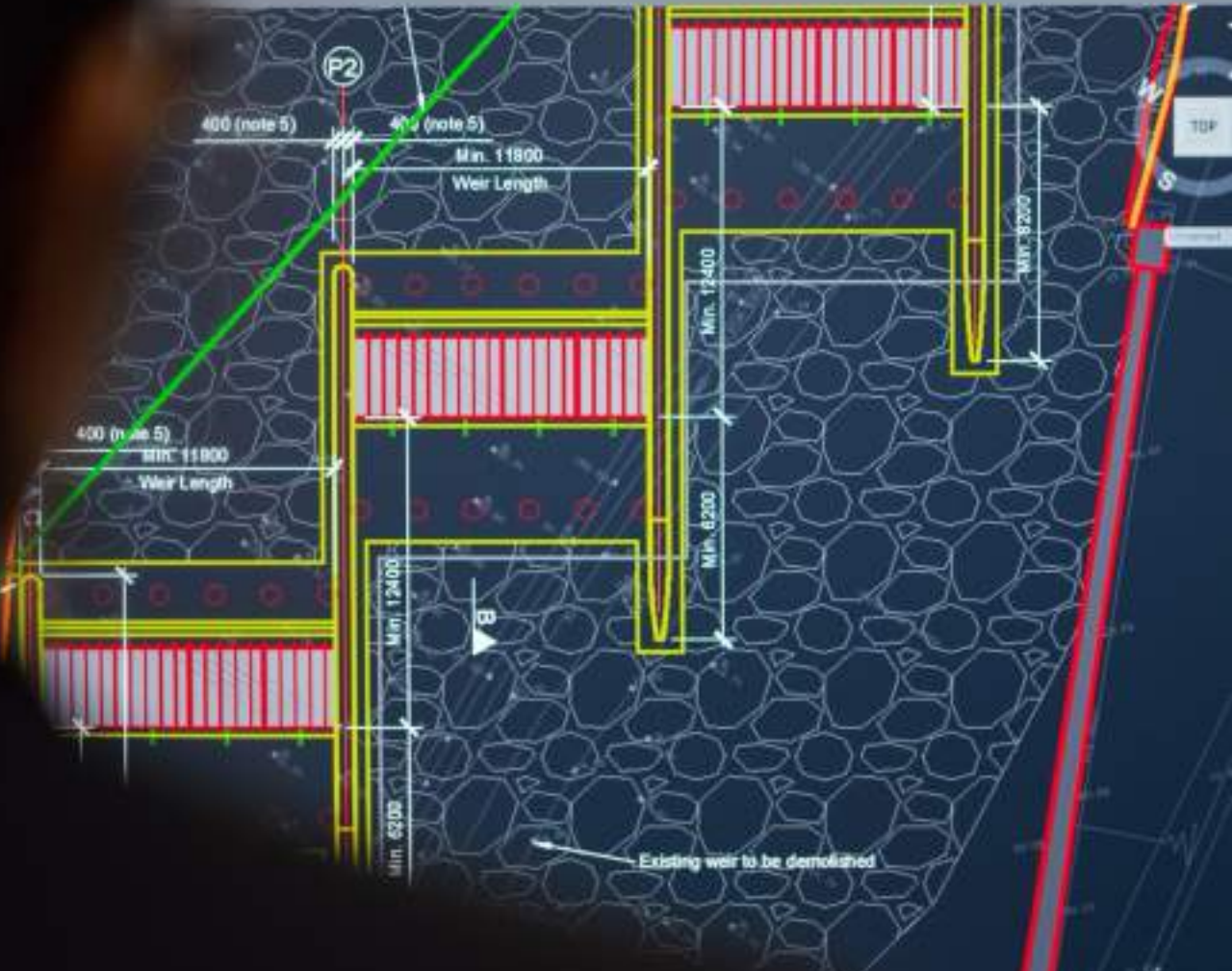
**“College is a place where a professor’s
lecture notes go straight to the students’
lecture notes, without passing through
the brains of either.”**

(wrongly?) attributed to Mark Twain



Engineering education

The process of preparing students for the professional practice of engineering.



Engineering education

Science

Mathematics

Physics

Chemistry

Computer
Science

...

Management

"Management is a multi-purpose organ that manages business and manages managers and manages workers and work."

Peter Drucker

In "The Principles of Management"



Management education

Accounting

Marketing

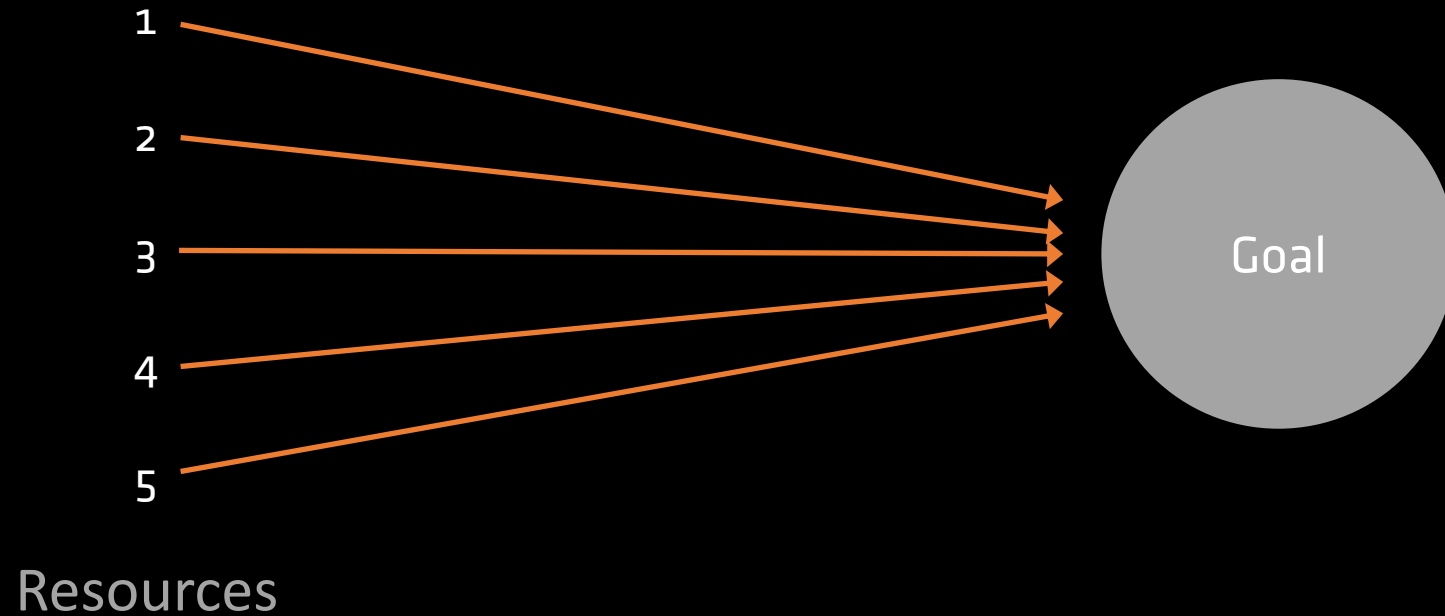
Human
resources

Fiscal
responsibilities

Leadership

...

Causal Reasoning (managerial)



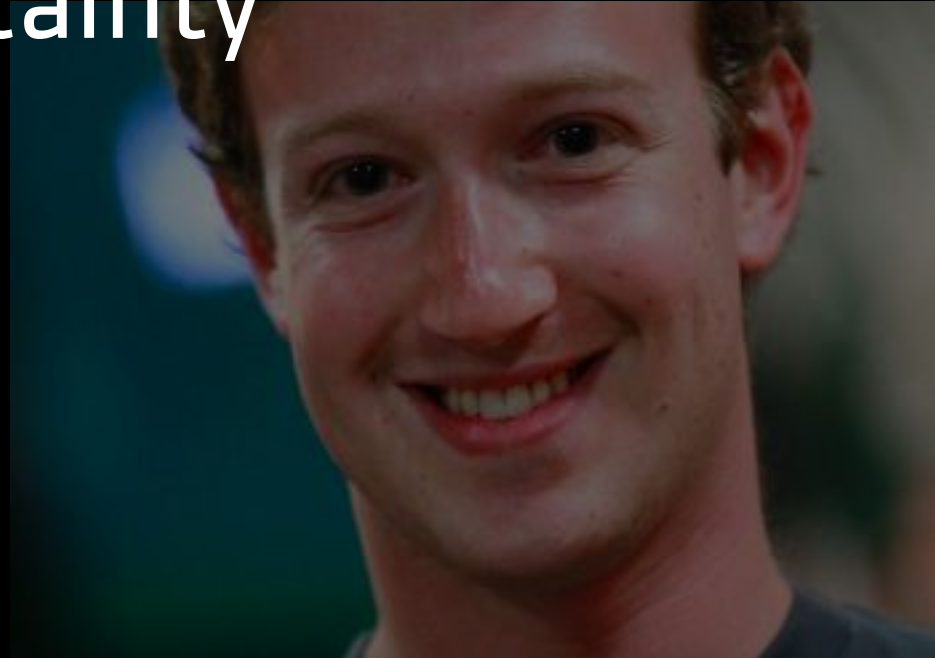
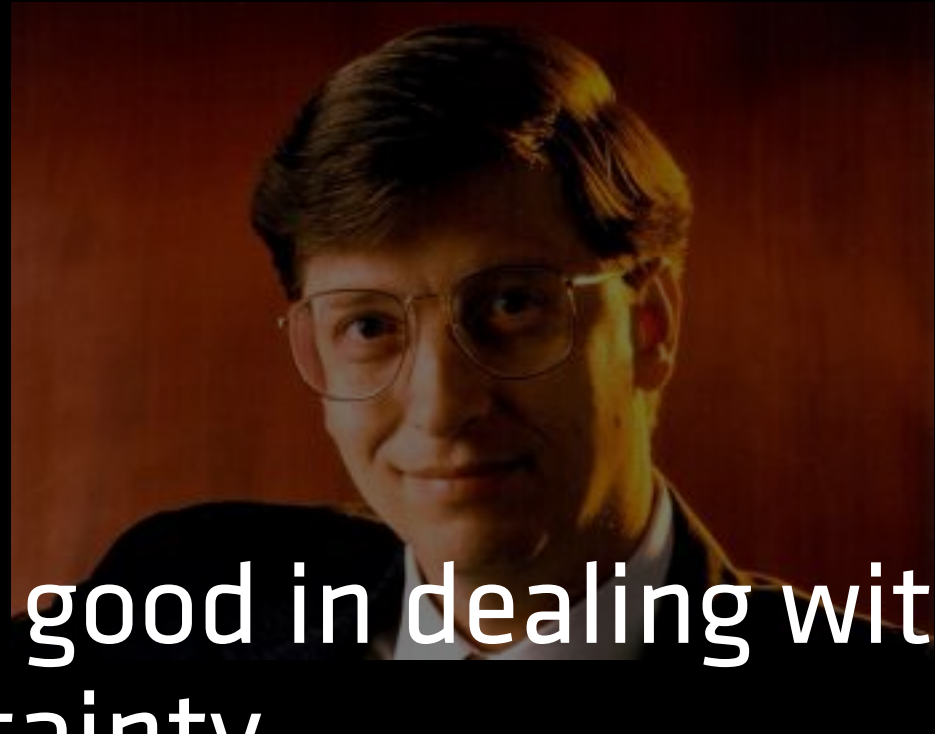
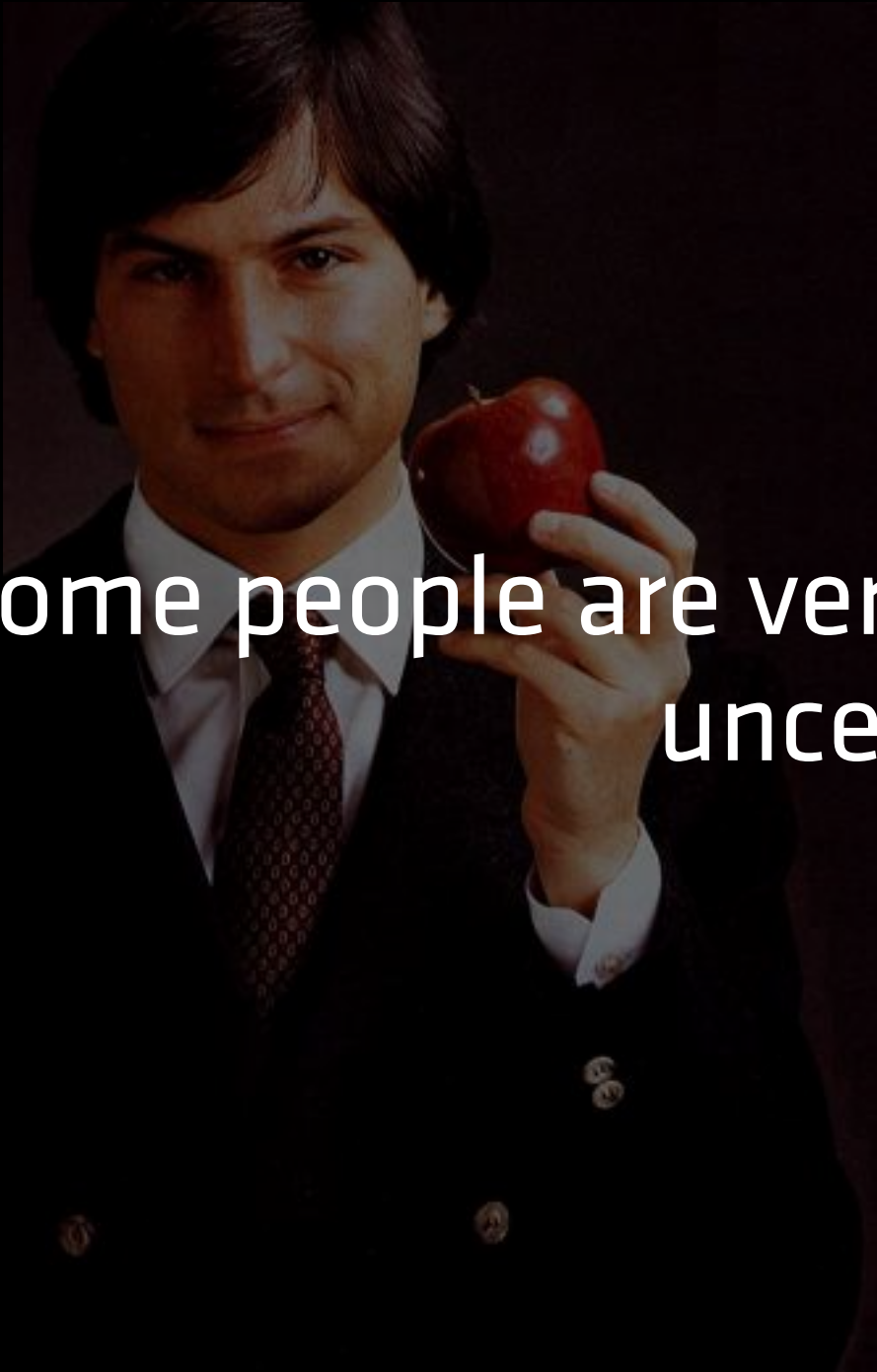
Education Environment

- Predictable
- Certain
- Specialized
- Known inputs
- Linear
- Expected outputs
- Competitive
- Focus on planning

“Real World”

- Predictable → • Unpredictable
- Certain → • Uncertain
- Specialized → • Multiple skills
- Known inputs → • Unknown inputs
- Linear → • Iterative
- Expected outputs → • Variable outputs
- Competitive → • Collaborative
- Focus on planning → • Focus on action

Some people are very good in dealing with uncertainty



What is entrepreneurship?

“Entrepreneurship is the process by which **individuals** pursue **opportunities** without regard to the **resources** they currently control”

Howard Stevenson, 1983



How do entrepreneurs think?

Entrepreneurs are permanently making decisions and acting



How do they do it?

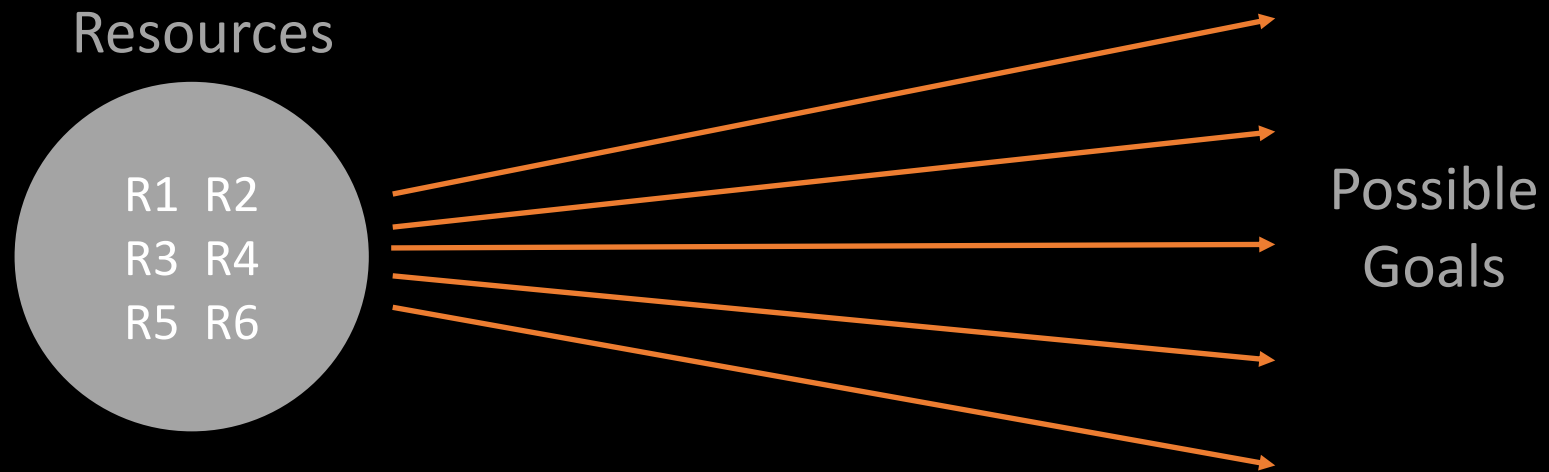


What do they have in common?



To answer this question Saras Sarasvathy conducted a study involving a large group of successful entrepreneurs

Efectual Reasoning (entrepreneurial)



Teaching personal initiative beats traditional training in boosting small business in West Africa

Francisco Campos,^{1*} Michael Frese,^{2,3*} Markus Goldstein,^{1*} Leonardo Iacovone,^{1*}
Hillary C. Johnson,^{1*} David McKenzie,^{1*†} Mona Mensmann^{3*}

Standard business training programs aim to boost the incomes of the millions of self-employed business owners in developing countries by teaching basic financial and marketing practices, yet the impacts of such programs are mixed. We tested whether a psychology-based personal initiative training approach, which teaches a proactive mindset and focuses on entrepreneurial behaviors, could have more success. A randomized controlled trial in Togo assigned microenterprise owners to a control group ($n = 500$), a leading business training

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training
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Sample

- 1500 microenterprises
- In business > 12 months
- <50 employees
- average monthly sales: \$200



3 test groups of 500 microenterprises

Traditional business training

- Accounting
- Marketing
- Human resources
- Formalization

Personal initiative training

- Self-starting
- Innovation
- Goal setting
- Planning
- Feedback
- Barriers

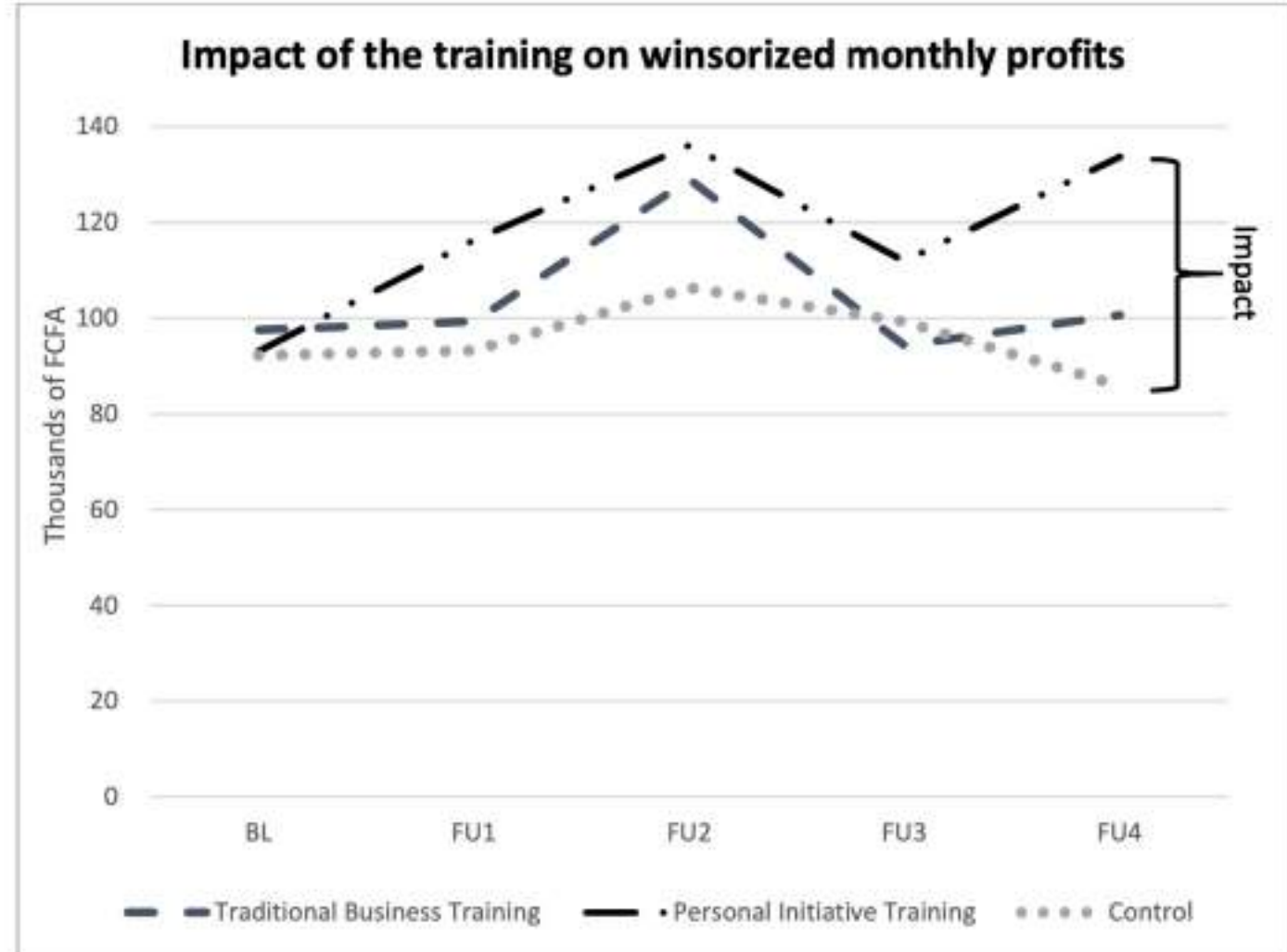
Control group

- No treatment

Follow-up surveys (2 years)

Personal initiative training
increased firm profits by 30%,
compared with a statistically
insignificant 11% for
traditional training.

Figure S1: Round by Round Trajectory of Monthly Profits



Notes: BL denotes Baseline, FU1-FU4 denote follow-up 1 through follow-up 4.



The traditional education model needs adaptation



Students need incentive and support to develop their own projects



Risk Adverse
Society

What is innovation?

“Innovation is the multi-stage process whereby organizations **transform ideas into new/improved products, services, or processes**, in order to advance, compete, and differentiate themselves successfully in their marketplace.” Baragheh et al. 2009

Innovation Mindset



Trust



Resilience



Diversity



Belief



Perfectionism



Collaboration

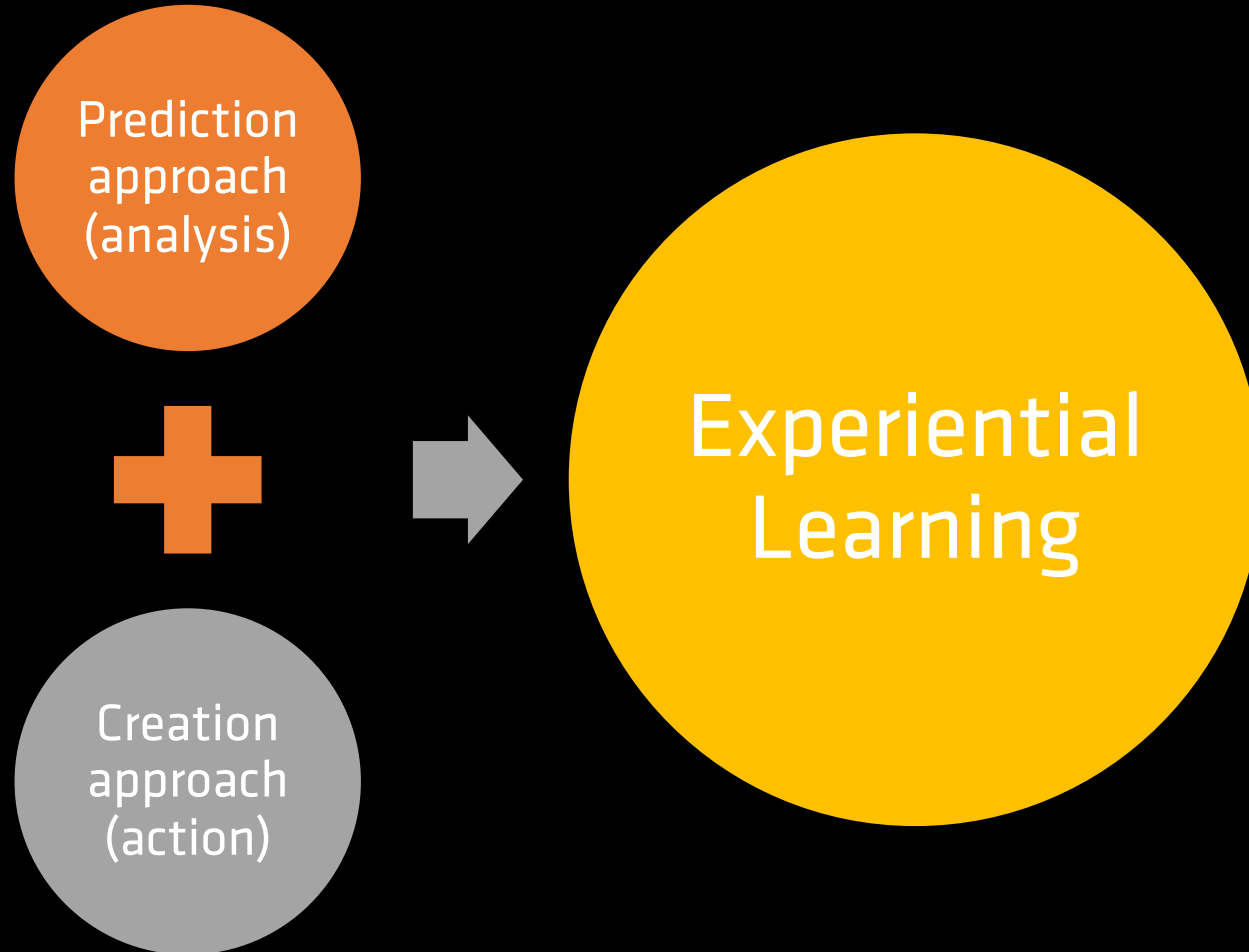


How?

1st Challenge

Education beyond the
transmission of knowledge

Knowledge + Innovation Mindset





Help student organizations to succeed



Promote co-creation

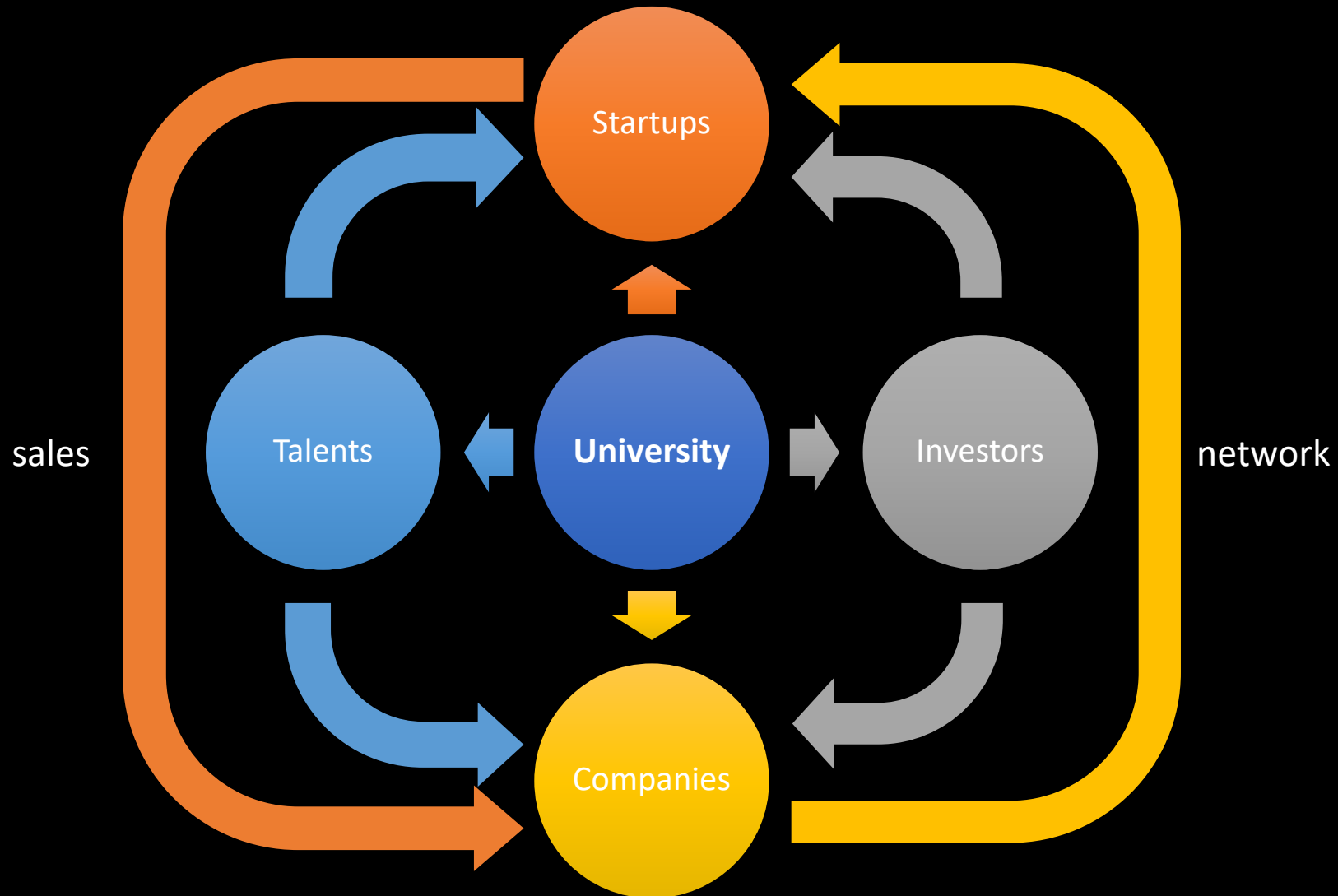


Promote the
Acceptance of
Failure

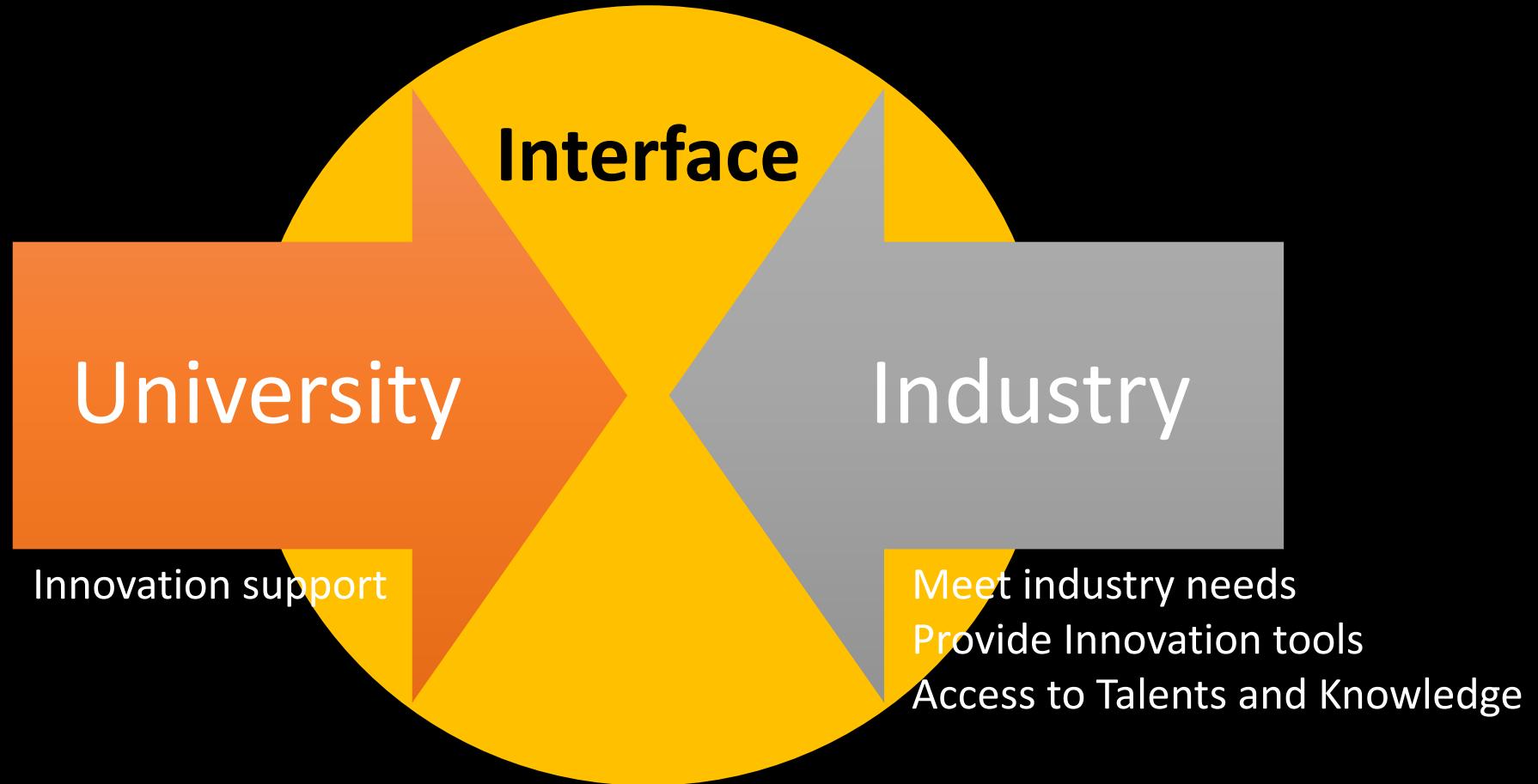
2nd Challenge

The University needs an
interface to its innovation
ecosystem

The University can have a central role in an innovation ecosystem



Interface for Innovation





Provide a Physical Hub

Shario

Competitive Advantages



Optimization
of services



Distinctive
profiles



1st in the
market



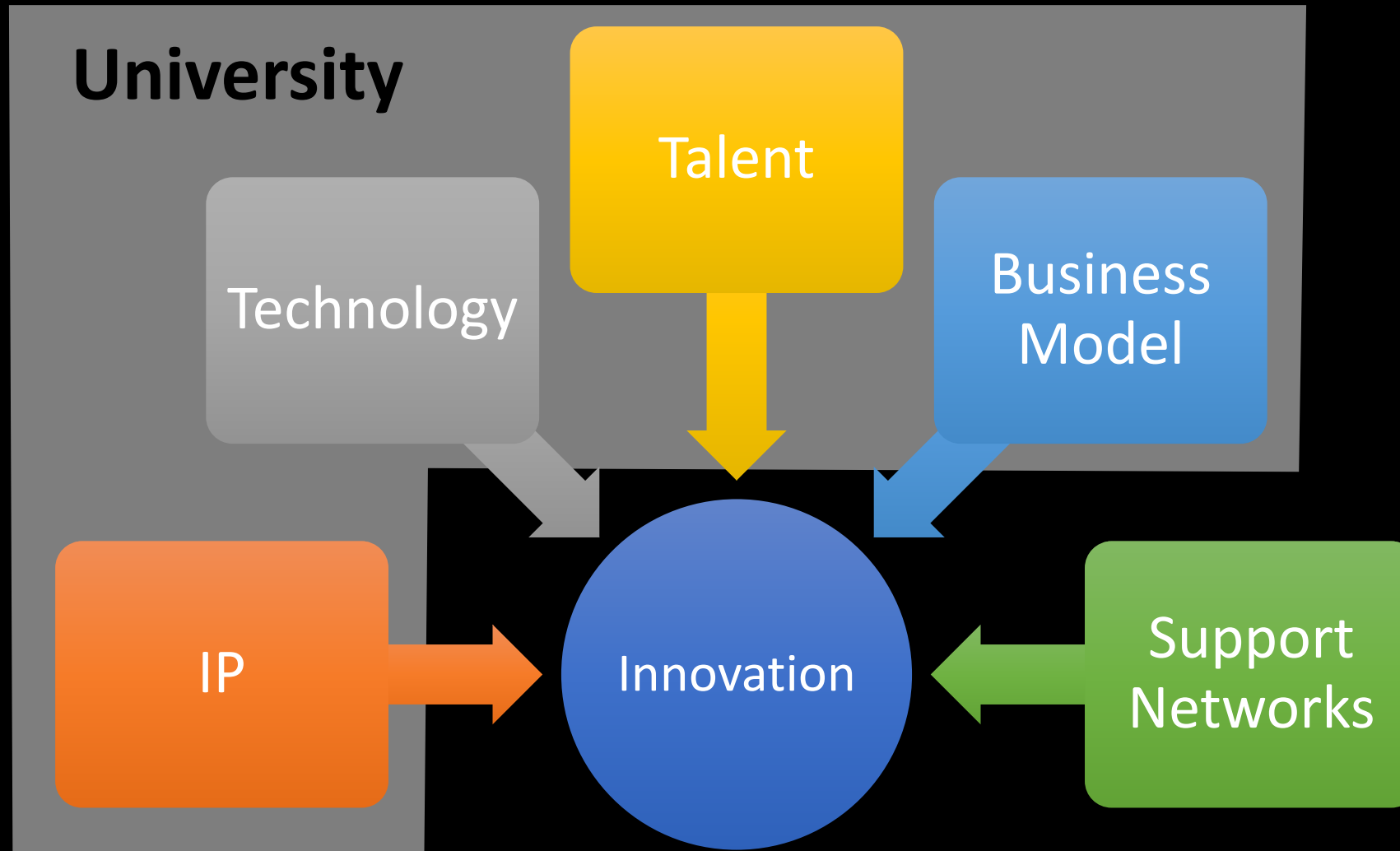
Ease of use



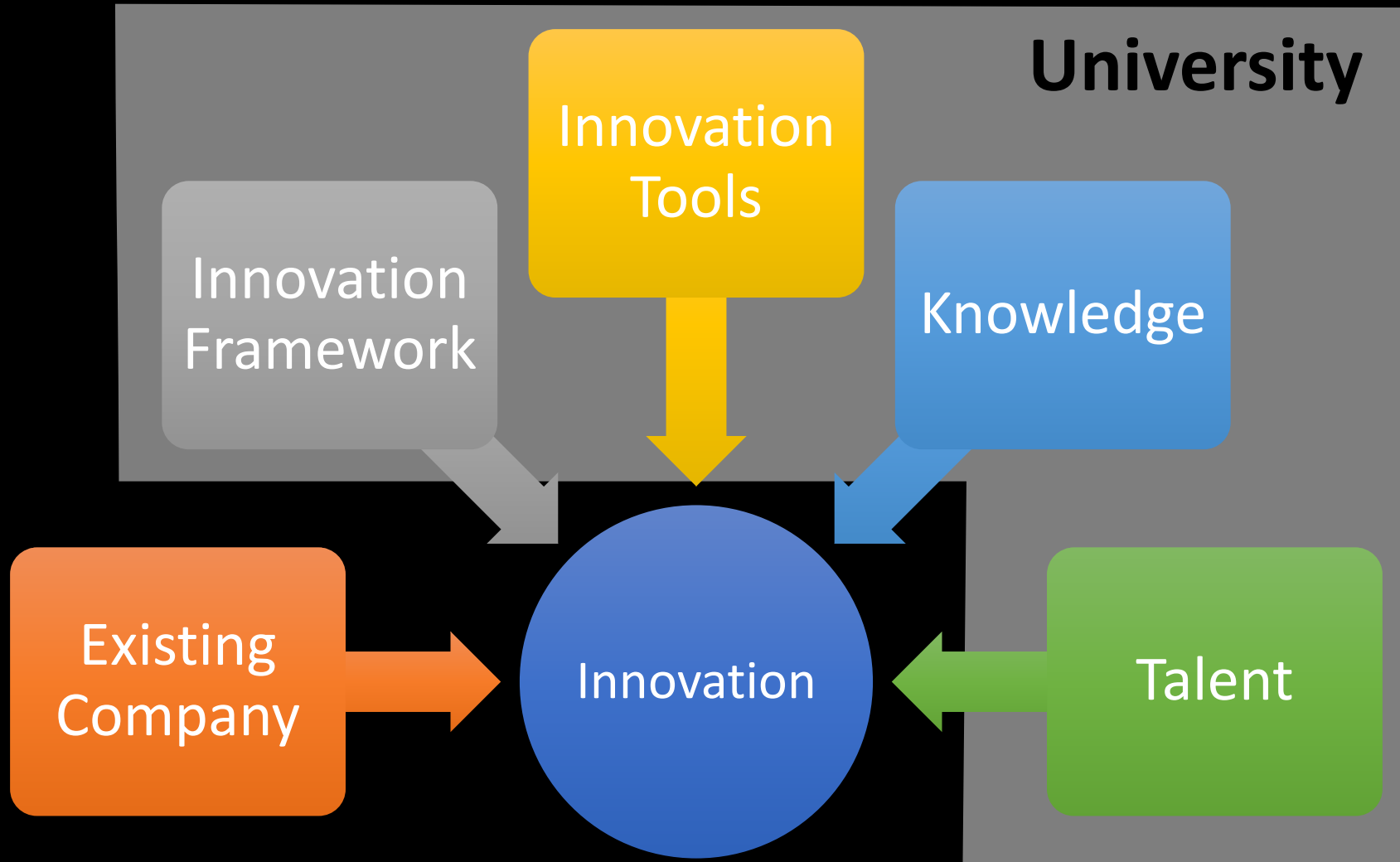
Personal
customer
service

Keep investors involved

Startup Creation



Existing Companies



Building an Innovation Mindset

Teaching Staff

New ways of
teaching

Promote
innovation

Students

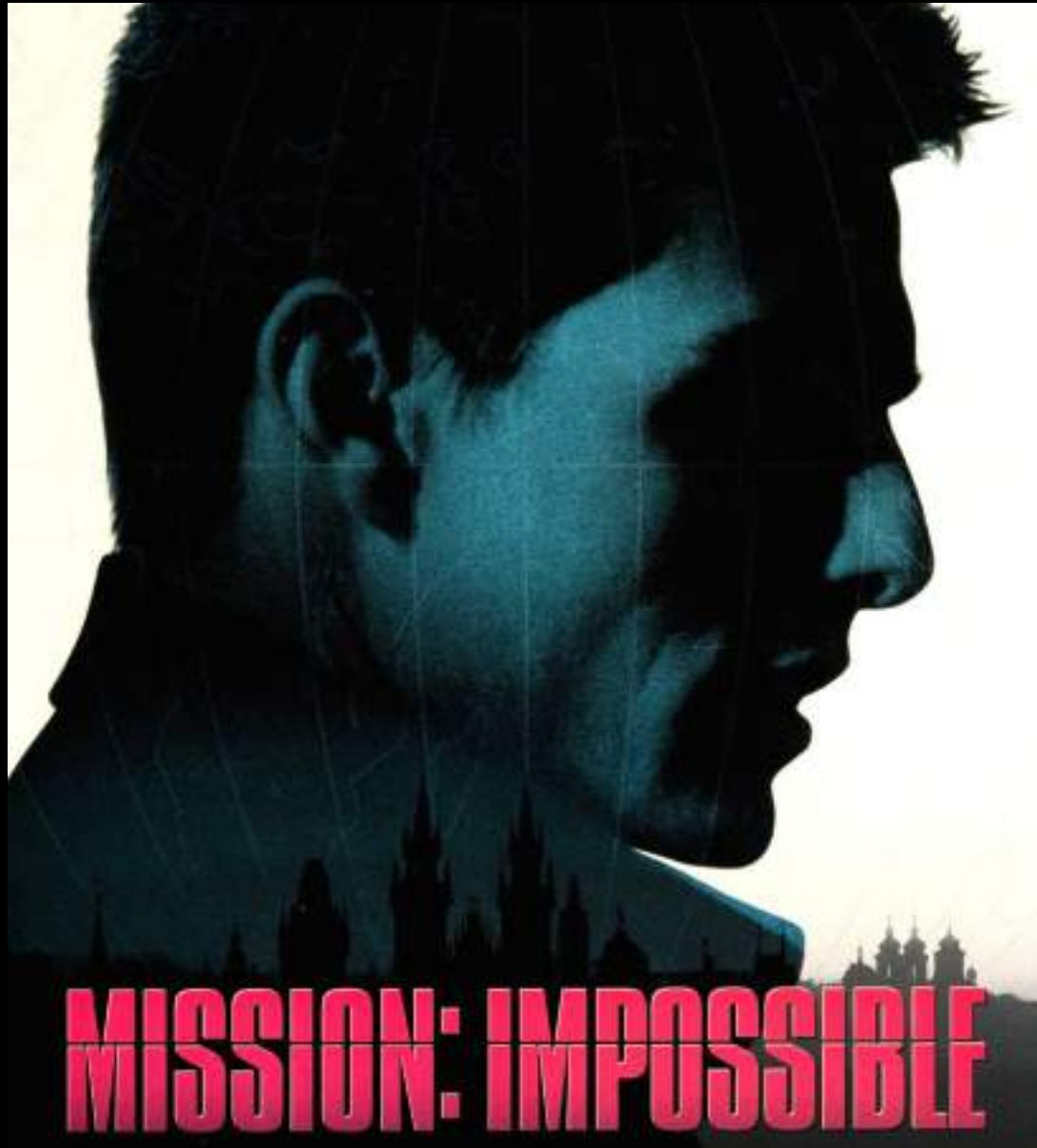
Real-world
problems

Better prepared
for change

Innovation Lab

Innovation
interface

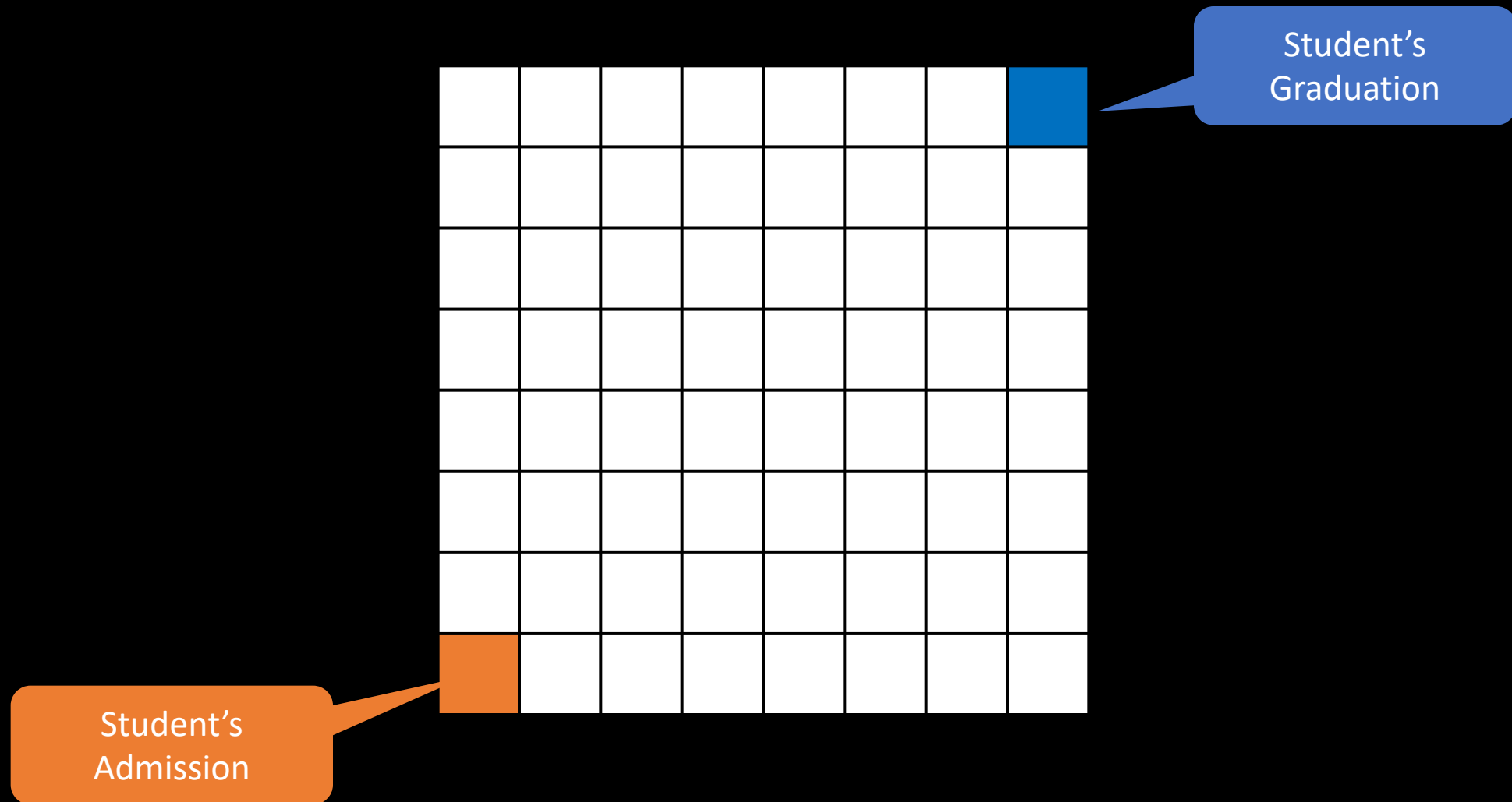
Promote and
support
entrepreneurship



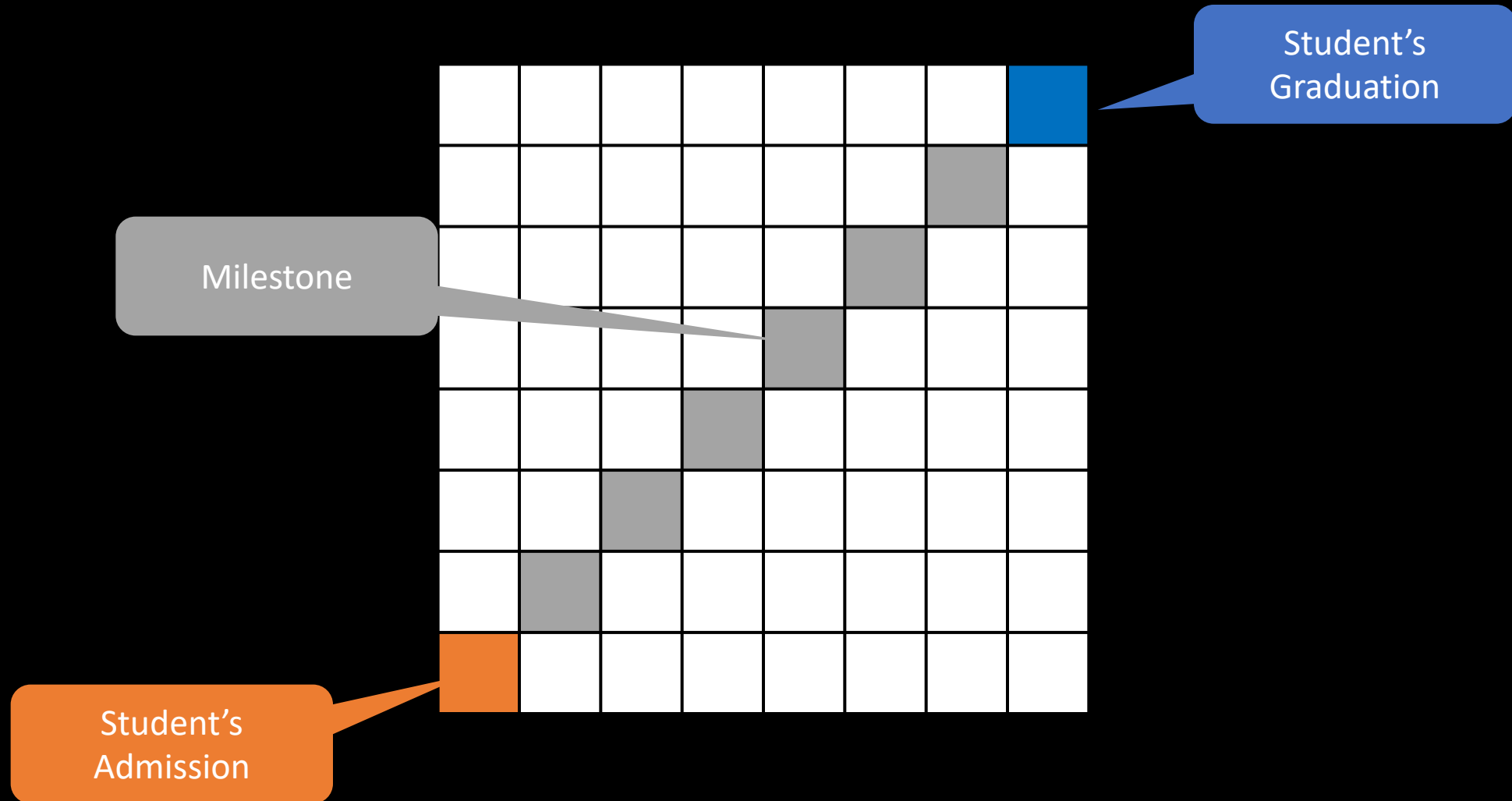
Your Mission:

Design a student's
journey for
fostering an
innovation mindset

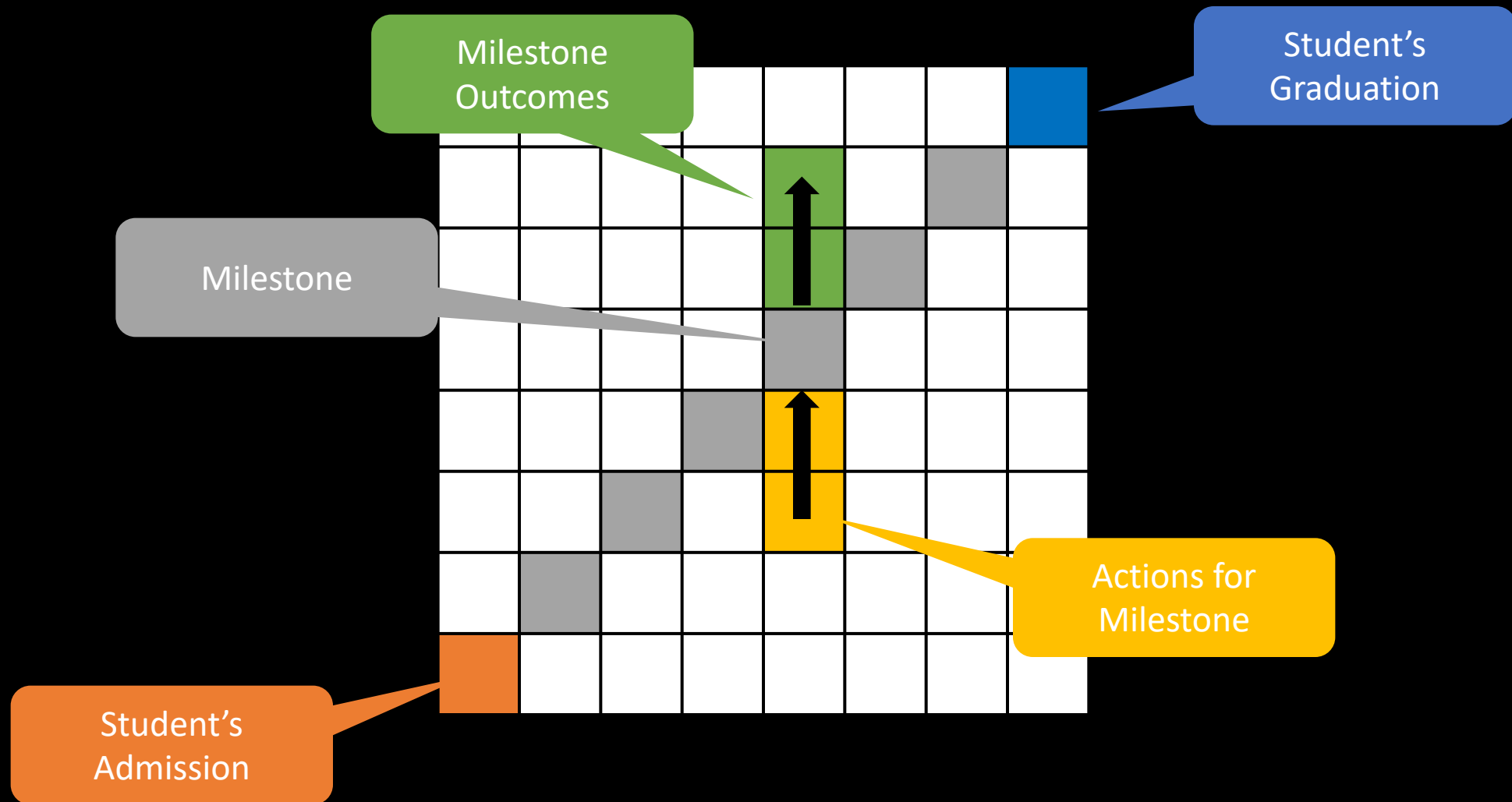
Student's Innovation Mindset Journey



Student's Innovation Mindset Journey



Student's Innovation Mindset Journey





Work with your team on your
Student's Innovation Mindset Journey

Innovation Mindset

Trust

Resilience

Diversity

Belief

Perfectionism

Collaboration

A gallery of colorful, stylized cat paintings on easels. The paintings feature various cat breeds and colors, including black and white, blue and red, and yellow and red. Some paintings include musical notes and the text 'MAM-A'. The background shows a window with a view of a building and a potted plant on the left.

Visit the gallery

“Innovation distinguishes
between a leader and a
follower”

Steve Jobs

Obrigado