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TALK ON
BIRAC-PACE
DECODING THE FUNDING OPPORTUNITY

14 July 2023 | **03.00 PM - 05.00 PM** | **Online via ZOOM**

4 slots for one-on-one mentoring available

Pre-Book Now !

Speaker and Mentor

Smita Kale, PhD

Advisor - Bioincubation, Venture Center

Mentor

Premnath V, PhD

Director, Venture Center | Scientist- Polymer Science & Engineering Division at NCL

Register or scan at:https://tinyurl.com/14july-pace

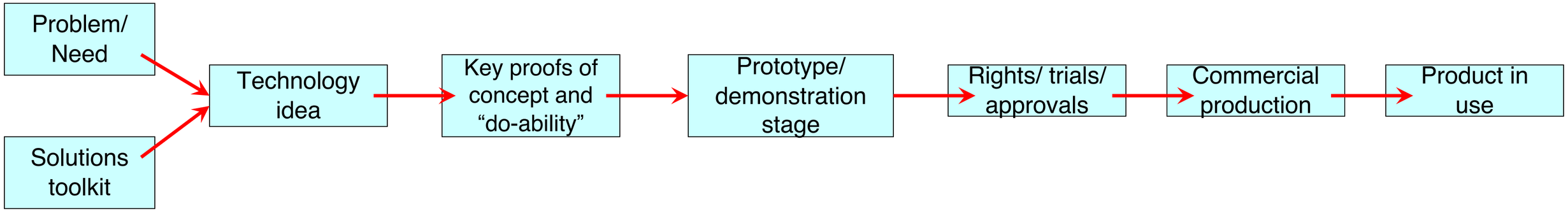
More on: www.techex.in

Technical related: Kavita Parekh | 8956457042 | kavita.parekh@venturecenter.co.in
Registration related: Vineet Joshi| 91564 65141| vineet.joshi@venturecenter.co.in

Scope of today's session:

- Innovation (tech development/ de-risking) funding and NOT exploratory research funding!
- Funding to academic/ R&D organizations as lead grantee and NOT for startups or industry as lead grantees.

Taking a technology to the market



Invention

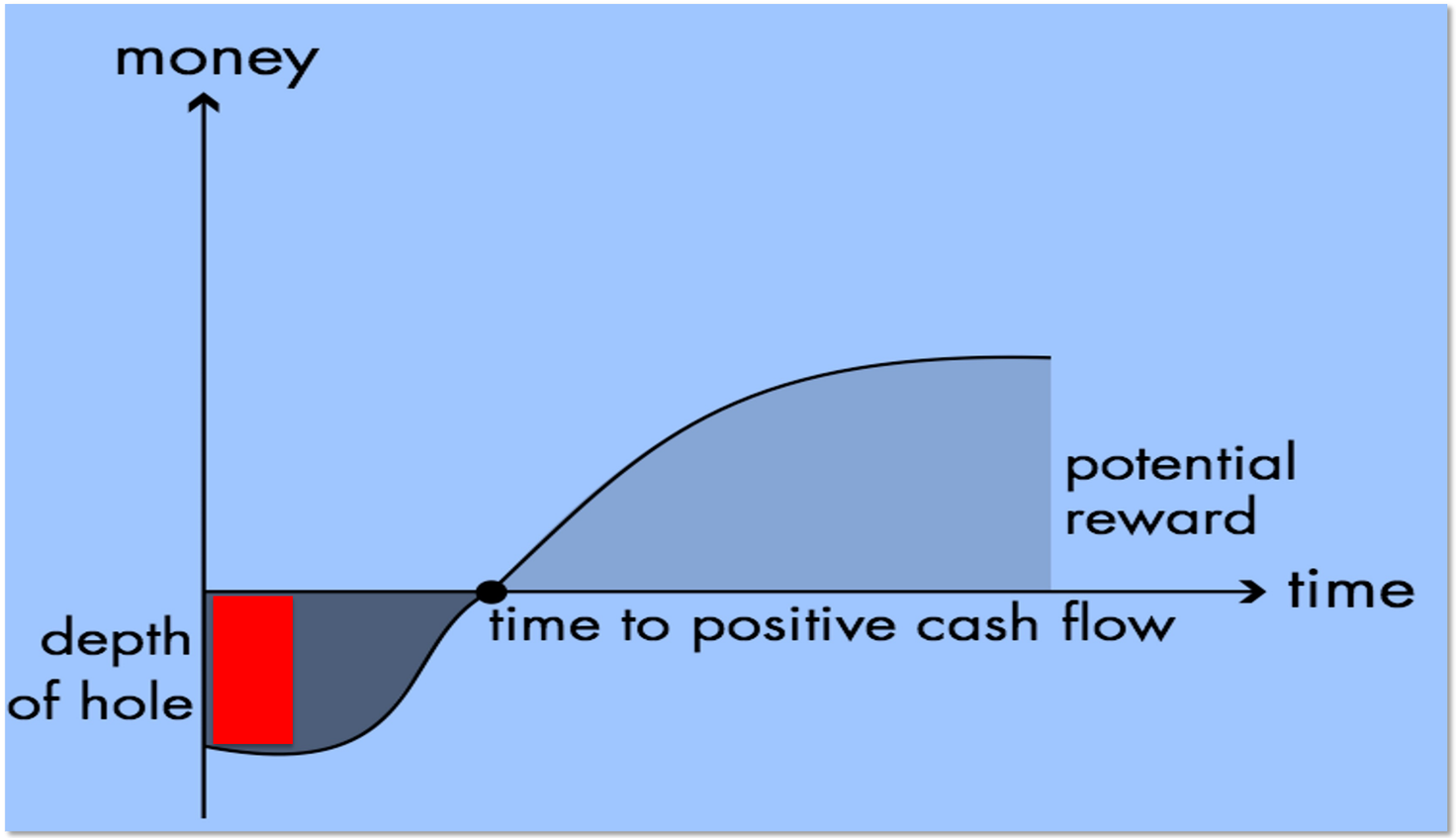
Journey to market!

Note: This journey is rarely linear or untangled in practice!

Routes to market:

- Technology transfer to an existing company
- Set up a new company: Startups and spinouts
- Others (example, in-house, partnership models etc)

The Role of Grants



- Reduce risks and uncertainties
- Improve Internal Rate of Returns for investors via grant funding (red)
- Create a funding/investment continuum

Graph: William H. Sahlman, "How to write a great business plan" HBR Jul-Aug 1997

Pointers for BIRAC-PACE

PACE is BIRAC's **innovation funding program** aimed at
academics / R&D organizations meant for
advancing a technology in the Technology Readiness Level scale.

Premnath V

10 Nov 2021

VENTURE CENTER

Website: https://www.birac.nic.in/desc_new.php?id=286

There are **three** call for proposals in a year.

15th February – 31st March
15th June – 31st July
15th October – 30th November

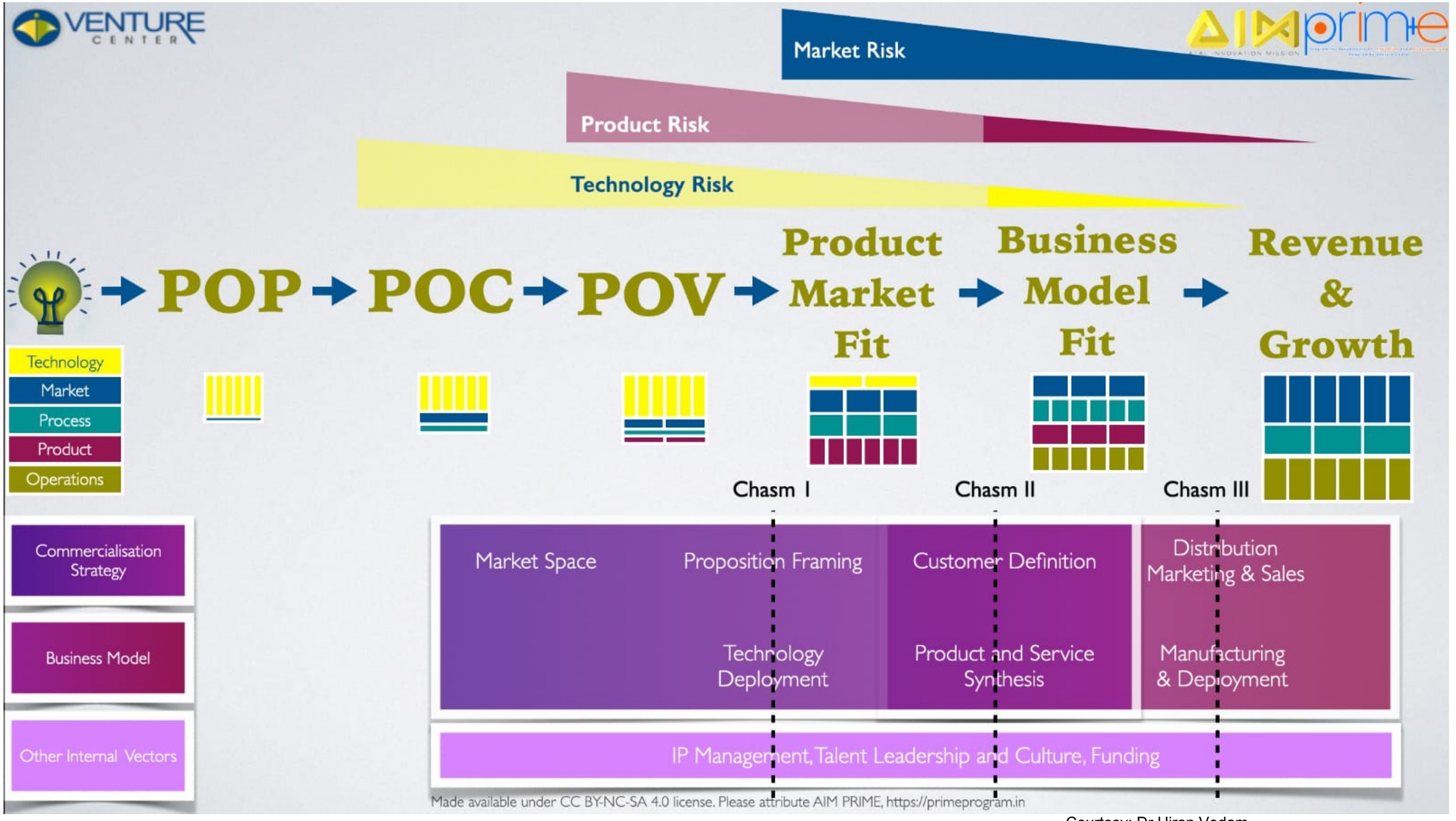
Scheme document:
https://birac.nic.in/webcontent/1613355528_PACE_scheme_document_15_02_2021.pdf

Focus

- Technology de-risking and advancement closer to market

- End point:
  - -- Tech transfer
  - -- Spinout company

Technology Readiness Levels
TRLs



Courtesy: Dr Hiran Vedam
Courtesy: AIM PRIME Program

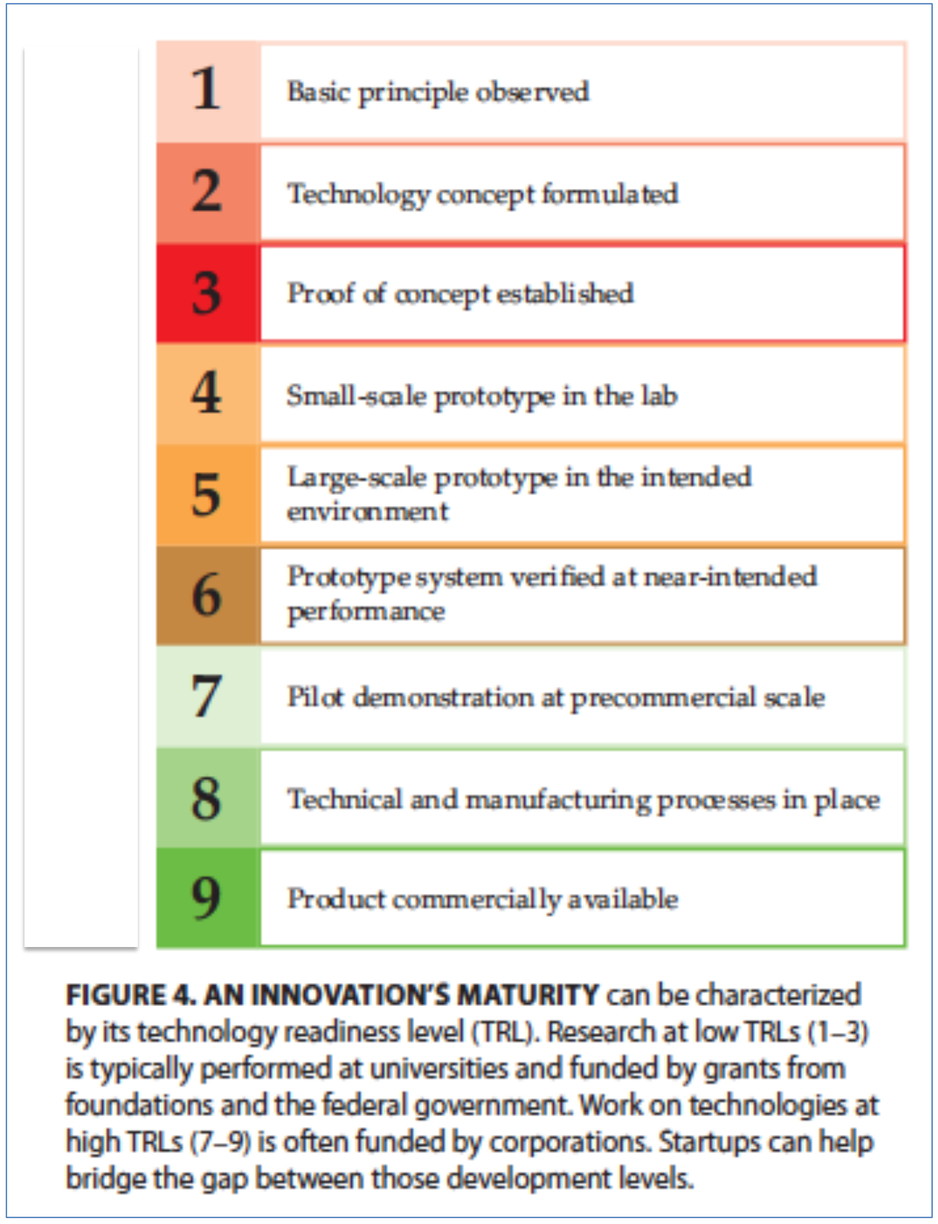
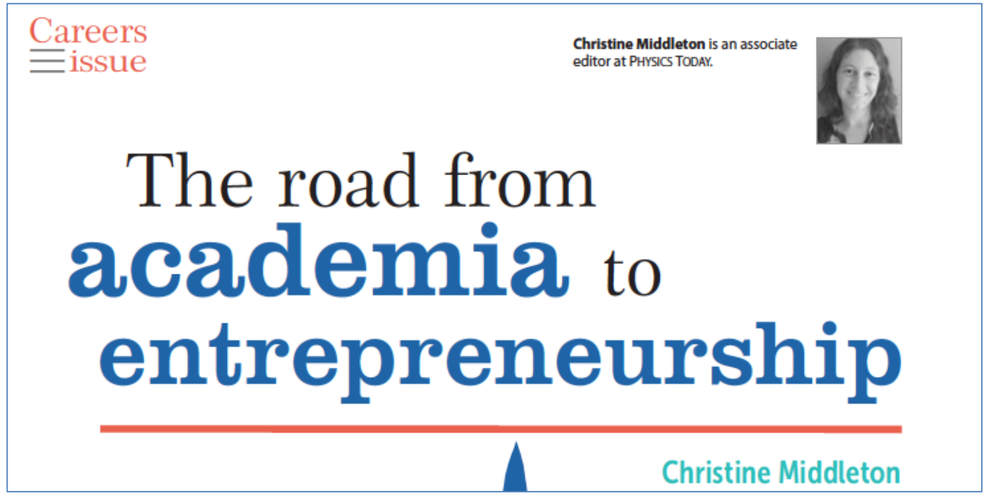


FIGURE 4. AN INNOVATION'S MATURITY can be characterized by its technology readiness level (TRL). Research at low TRLs (1–3) is typically performed at universities and funded by grants from foundations and the federal government. Work on technologies at high TRLs (7–9) is often funded by corporations. Startups can help bridge the gap between those development levels.

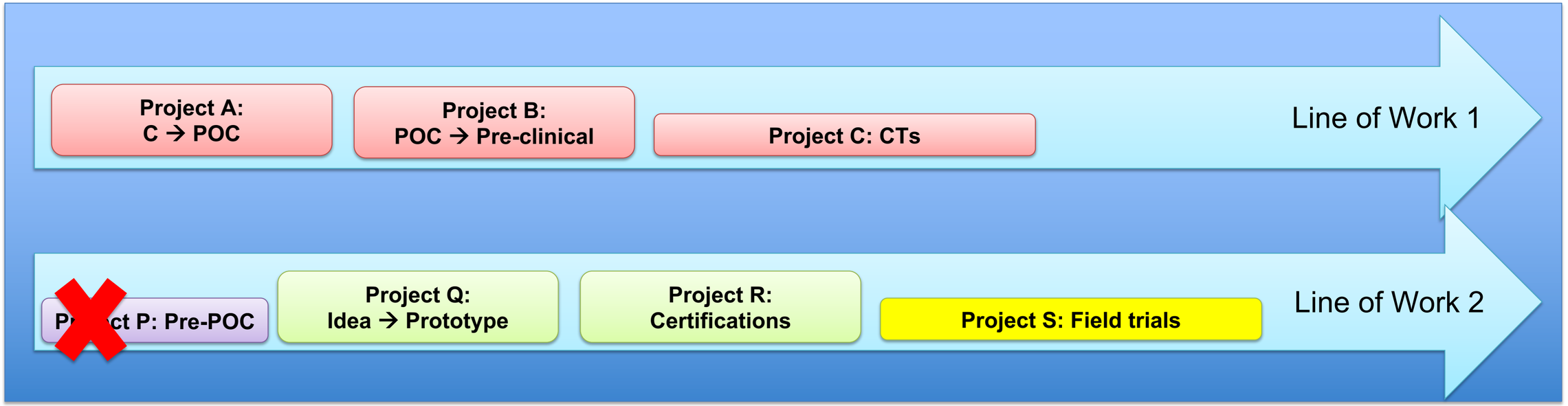


Physics Today, Oct 2021

BIRAC TRL Scale

- Website: https://www.birac.nic.in/desc_new.php?id=443
- Scales:
  - -- Drugs (including Drug Delivery)
  - -- Vaccines
  - -- Biosimilars
  - -- Regenerative Medicine
  - -- Medical Devices and Diagnosis
  - -- Artificial Intelligence, Big Data Analysis, IoT's, Software Development & Bioinformatics
  - -- Industrial Biotechnology (including secondary agriculture)
  - -- Agriculture
  - -- Aqua Culture and Fisheries
  - -- Veterinary

Suitable stages



PACE-AIR

From POP/ TRL2+ onwards

Nature of the project

- Technology development
  - -- Problem-Solution Approach
  - -- Advance from POP/TRL2+ onwards

- Desired end-point:
  - -- Demonstration of key results (for go-no go decisions)
  - -- Intellectual property
  - -- Documented interest from a potential licensee

- Commercialization potential
  - -- Indication of demand
  - -- Potential licensee
  - -- Clarity of problem, solution, value proposition, positioning etc
  - -- Intention and track record

- Prior work/experience:
  - -- Proof-of-principle (POP) established (adequate detailing done and clarity that idea has good chance of working! Prelim data available)
  - -- Experience running government grant projects; Experience of R&D in same field
  - -- Clear ownership of background knowhow/IP

Applicant

Primary Applicant
(Mandatory)

- Academic institute, University
- R&D organization
- NGO/ Research Foundation

Joint Applicant 1
(Optional; Encouraged)

- Industry
- Startup (> 5 years)

Joint Applicant 2
(Optional)

- Academic institute, University
- R&D organization
- NGO/ Research Foundation

MoU

- Scope
- Roles and responsibilities
- Cost and reward sharing
- IP

Duration and budget

- Duration: Up to 24 months
- Budget: Up to Rs 50 lakhs
- Support:
  - -- 100% of project cost; Grant-in-aid to academia/R&D orgs/NGOs
  - -- None for industry/ startup partner except in outsourcing budget
- Funding terms:
  - -- Non-recurring/ equipment < 10% of total budget
  - -- No provision for overheads
- Installments:
  - -- For projects longer than 18 months -- (30%:20%:20%:20%:10%)
  - -- For projects shorter than 18 months -- (30%:30%:30%:10%)

Strengthening your proposal

- Typical criteria:
  - -- Clarity and soundness of problem, solution, value proposition
  - -- Commercial potential or national/social relevance
  - -- Technical soundness and strength; Novelty; Prelim data
  - -- Potential and likelihood of commercialization
  - -- Team credibility and completeness
  - -- Clarity of message and purpose from PL
  - -- Clarity of study plan, milestones, detailing, doability

PACE-CRS

From POC/ TRL3+ onwards

Nature of the project

- Technology development
  - -- Problem-Solution Approach
  - -- ***Take it ahead beyond POC/TRL3+***

- Desired end-point:
  - -- Demonstration of key results (for go-no go decisions)
  - -- Intellectual property
  - -- ***Tech transfer or spinout creation***

- Commercialization potential
  - -- Documented interest by a potential licensee
  - -- ***Clarity in next steps/ data needs/ scale up needs before tech transfer***

- Prior work/experience:
  - -- ***Proof-of-concept (POP) established***
  - -- Experience running government grant projects
  - -- Experience of R&D in same field; R&D track record
  - -- Clear ownership of background knowhow/IP

The study

- Next level of prototype and testing/ validation
  -- Alpha → Beta → Gamma

- Next level of scale-up or refinement/ optimization
  -- Lab → Batch → Pilot → Demonstration plant

- Demonstration/ trials on field/ real-life equipment/site

- Advancing for clinical safety and eficacy
  -- In vitro testing → testing as per standards → pre-clinical

- Testing for larger/ diverse sample size; Test for R&R, robustness

- Demonstrate superiority to alternatives

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(Mandatory)

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- NGO/ Research Foundation

Joint Applicant 1
(Mandatory)

- Industry
- Startup (> 5 years)

Industry partner could be:
- Potential licensee
- Contract research partner

MoU between partner

- Scope
- Roles and responsibilities
- Cost and reward sharing
- IP
- ***ROFR***
- ***Undertaking/ commitment of alignment with business strategy***

Duration and budget

- Duration: No time limit
- Budget: No ceiling
- Support:
  - -- 100% of project cost
  - -- Grant-in-aid to both academia/R&D orgs/NGOs and industry/startup
- Funding terms:
  - -- Non-recurring/ equipment < 10% of total budget
  - -- No non-recurring for industry/startup
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  - -- Team credibility and completeness
  - -- Clarity of message and purpose from PL
  - -- Clarity of study plan, milestones, detailing, doability
  - -- ***Credibility and capability of CRO/ Industry partner***

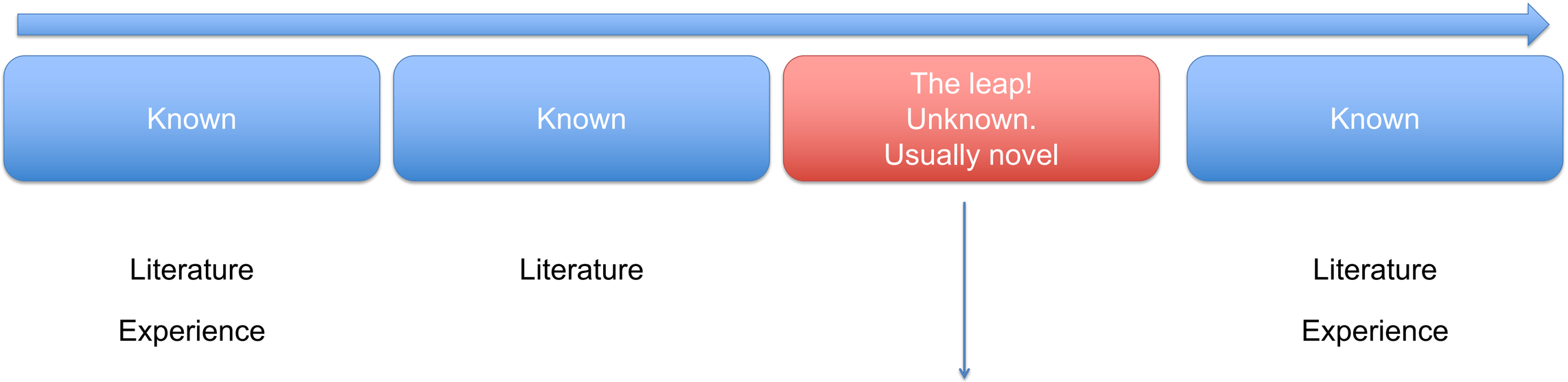
Contact for more details

Premnath V

director@venturecenter.co.in

Extra slides

The balance between novelty and knowns



The leap: Why is it feasible?

-- Prelim data

-- Comparable

-- Reasonable chance

First/ Early slide

- “Clear statement of the study” told early helps keeps the skeptics continue hearing and looking forward to details.

- To demonstrate POC for a SOLUTION for a PROBLEM via this NOVEL approach and thereby delivering IMPORTANT RESULT.
  - Problem and importance
  - Solution
  - Novelty

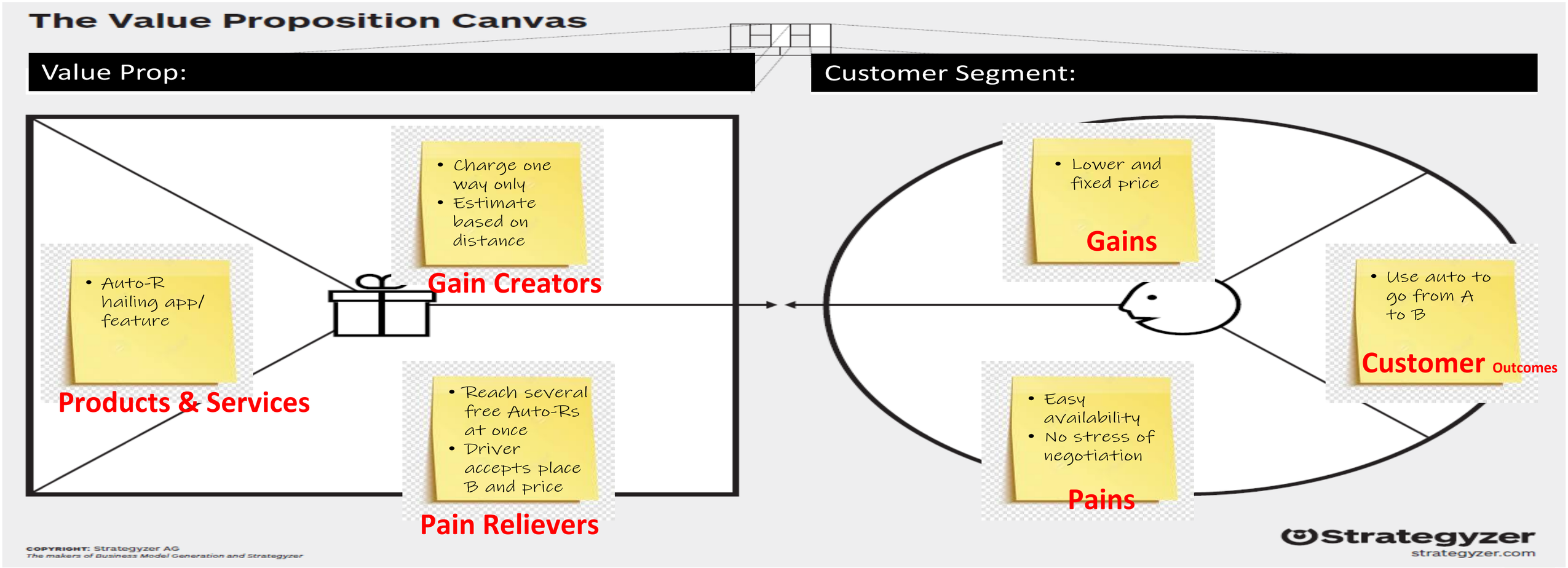
Business Sketch

- Offerings:
  - What is the offering (product, service)
  - Meant for whom?
  - Who will pay?
- Value proposition:
  - Value for whom
  - What value
  - Compared to what/ Positioning
- Revenue model:
  - How will it make money? Price, cost, etc
  - Key risks and uncertainties

What is a Value Proposition?

Source: Anonymous. Internet

AN EXAMPLE OF VALUE PROPOSITION MAP: AUTO-RICKSHAW HAILING APP



Courtesy: Sundara Nagarajan, IndusAge