



EIRO forum
serving european science

ESI 2019 Project Day – Technical and Market
Feasibility

Technology Transfer

Is the process of transferring skills, knowledge, technologies, methods of manufacturing, samples of manufacturing and facilities among governments or universities and other institutions to ensure that scientific and technological developments are accessible to a wider range of users who can then further develop and exploit the technology into new products, processes, applications, materials or services.

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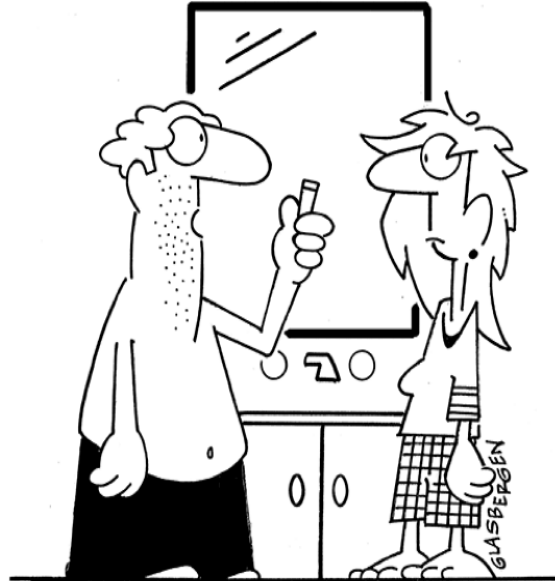
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Technology Transfer & Commercialization

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Complex Discovery



**"It's a toenail clipper that gets Facebook,
checks my e-mail and makes phone calls.
What do you mean, why do I need that?"**

Technology Transfer & Commercialization



Technology Transfer & Commercialization

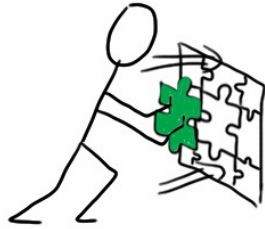
© Randy Glasbergen for RapidBI.com



“This is a major project of utmost importance, but it has no budget, no guidelines, no support staff, and it’s due in 15 minutes. At last, here’s your chance to really impress everyone!”

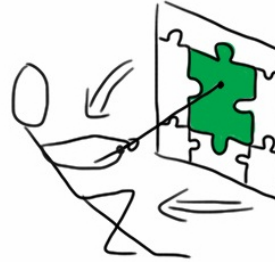
Technology Push and Market Pull

CAPABILITY PUSH



- 1 TECHNOLOGY ALREADY EXISTS
- 2 FIND DIFFERENT APPLICATIONS
- 3 FIND MARKET OPPORTUNITY

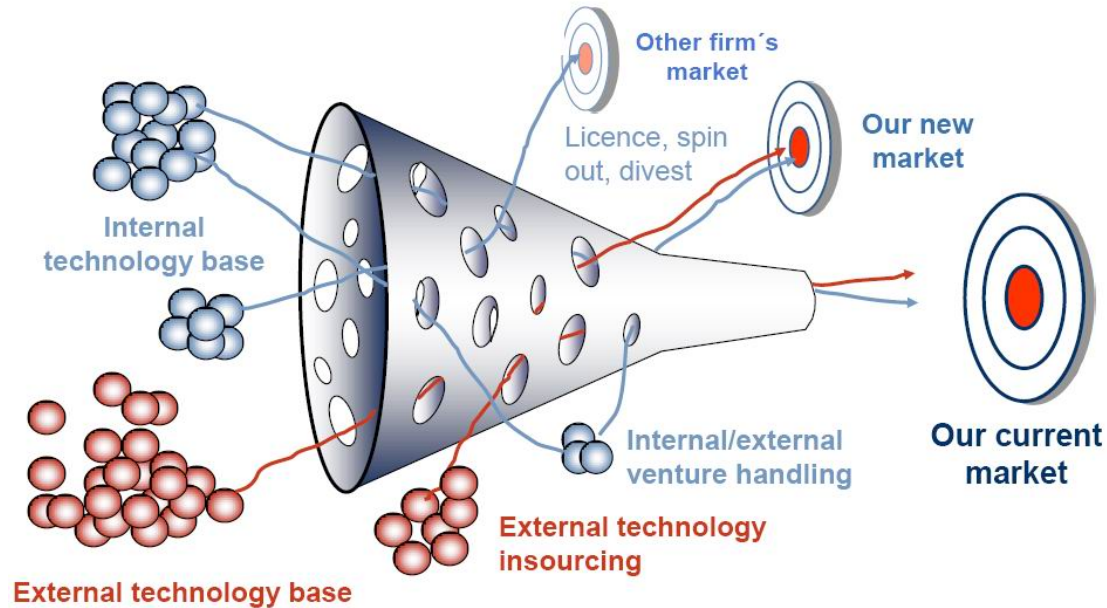
OPPORTUNITY PULL



- 1 SEE NEED/PROBLEM
- 2 DEVELOP TECHNOLOGY TO FULFILL NEED/
SOLVE PROBLEM

Source: <https://newentrepreneurship.files.wordpress.com/2012/07/push-pull-green.jpeg>

Open Innovation and the importance of TT



Universities and Research Organizations



Private Companies



Support Organizations



How can we transfer technology into
a business?

– Licensing between established entities

– New venturing:

ENTREPRENEURSHIP

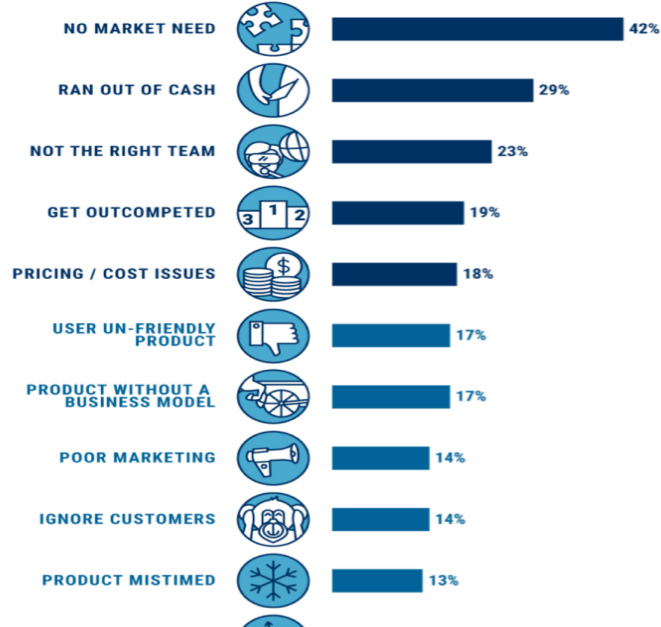
Start-up Development Phases

Main reason for failure?

Go to Kahoot.it again!

Start-up Development Phases

 **BASED ON ANALYSIS OF 101 STARTUP POSTMORTEMS**
Top 20 Reasons Startups Fail



Problem-Solution Fit

- Translate problems into solutions that will be adopted

Problem-Solution Fit canvas Purpose / Vision Version

Define CS, fit into CL	1. CUSTOMER SEGMENT(S) CS	6. CUSTOMER LIMITATIONS EG. BUDGET, DEVICES CL	5. AVAILABLE SOLUTIONS PROS & CONS AS	Explore AS, differentiate
	2. PROBLEMS / PAINS + ITS FREQUENCY PR	9. PROBLEM ROOT / CAUSE RC	7. BEHAVIOR + ITS INTENSITY BE	
Focus on PR, fit into BE, understand RC	3. TRIGGERS TO ACT TR	10. YOUR SOLUTION SL	8. CHANNELS of BEHAVIOR CH	Extract online & offline, clip of BE
Identify strong TR & EM	4. EMOTIONS BEFORE / AFTER EM		ONLINE OFFLINE	

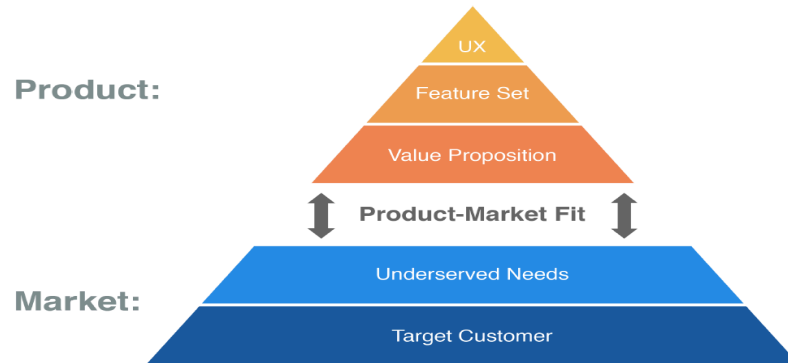
Problem-Solution Fit canvas is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. Designed by Daria Negriakhtina / @dariahackers - see tailor ideas to customer behaviour and increase solution adoption probability.

IdeaHackers .NL

Product-Market Fit

- Translate solutions in products that will be acquired by your customers

The Product-Market Fit Pyramid



© 2018 @danolsen

Product-Market Fit

People don't want
a quarter-inch drill

They want a
quarter-inch hole



© 2018 @danolsen

Product-Market Fit

- Problem space vs solutions space

Problem Space	Solution Space
<p>A customer problem or benefit that the product should address</p> <p>A well-written user story: “As a_, I want to_, so I can_.”</p>	<p>A specific implementation or design to address the customer need</p>

Product-Market Fit

RUSSIAN SPACE PEN

- Works in zero gravity
- Works upside down
- On almost any surface
- In extreme temperatures

When NASA first started sending astronauts into space, they realized that the ball-point pen would not work at zero gravity.

A million dollar investment and two years of tests resulted in a pen that could write in space, upside down, on almost any surface and at temperatures ranging from below freezing to over 300°C.

When confronted with the same problem, the Russians used a pencil.

This is a replica of the writing instrument used by Soviet Cosmonauts on early manned space flights.

Modern High Identification by Studio Tools for Worldwide.co

Worldwide.co
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Product-Market Fit



Product-Market Fit



Oreo

Product-Market Fit



Product-Market Fit



Problem vs Solution

Problem space (user benefits)

Book an accommodation

- 1. Define specific problems-benefits.
- 2. Group by topics
- 3. Define specific solutions

Solution Space (product)



Next step

1. Explore the different applications identified (solutions/products/services)
2. Implement an initial technical feasibility of the technology. Clearly identify the added value of your technology (what is the main value in the technology?)
3. Understand the market:
 1. Identify main Stakeholders (internal and external for the commercialization)
 2. Identify main potential receivers (your clients) and users (the final clients)
 3. Identify main barriers of the market
4. Consider the need to agree on the license of the technology to your company:
 1. Steps to achieve a successful transfer of the technology (development needed?, funding needed?)
 2. Foresee critical negotiation points

Consider the IP aspects

Exclusivity and duration

Geographical coverage

Sectorial coverage

Remuneration: Patent maintenance costs, Royalties and other payments. Consider initial investment of the company for the integration in the remuneration

Any IP developed during technology integration?

Use of other image rights

Thank you

Lluc Diaz (ESA)
IMKTT WG Chair EIROforum

