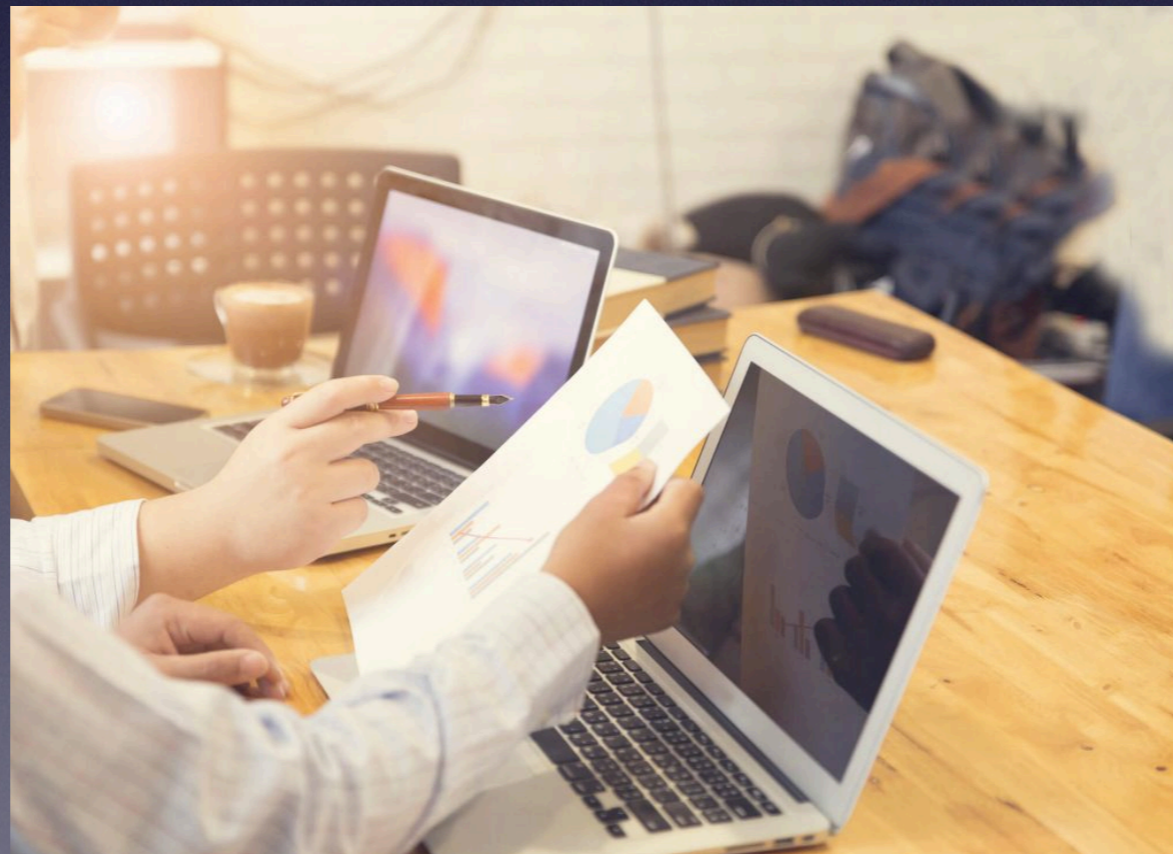




Modelagem de requisitos e tech startups





O AWS EdStart é o programa acelerador de startups de tecnologia educacional da AWS, projetado para ajudar empreendedores a criar a próxima geração de soluções de aprendizado online, análises de dados, e gerenciamento de campus, na Nuvem AWS. O acelerador foi criado para que as startups EdTech aproveitem rapidamente benefícios como: apoio financeiro sem capital próprio, por meio do crédito promocional AWS, treinamento e suporte técnico, além de acesso a uma comunidade global de especialistas em tecnologia educacional e muito mais. Há uma razão para termos mais startups se estabelecendo na AWS do que em qualquer outro provedor: estamos aqui para ajudar você a ter sucesso, desde a ideia inicial até o estabelecimento. O AWS EdStart ajuda os empreendedores de EdTech a criarem soluções seguras, escaláveis e econômicas. Se a sua empresa tem o sonho de revolucionar a educação, inscreva-se no AWS EdStart e comece agora a sua jornada.



Renata Trindade, Gerente de Programas de Educação para setor público, AWS EdStart



2013: Edtechs sun rising





Educational Technology at Pivotal Crossroads

Authors

[Authors and affiliations](#)

Radhika Venkat, Jayanta Banerjee

Abstract

Educational technology startups, commonly referred to as EdTech, combine education and innovative technology to transform school environments and improve student learning outcomes. Set against the backdrop of primary and secondary schools, this exploratory study uncovers the most important factors affecting the growth of EdTech startups in Bengaluru, India. Drawing on Isenberg's Entrepreneurship Ecosystem Model (2010, 2011) this exploratory, qualitative study concludes that "lack of conducive culture, infrastructure support, and finance as well as inadequacies in entrepreneurial approach and value addition" affect the growth of startups in EdTech Entrepreneurial landscape.



Common definition

What Is EdTech?

EdTech (a combination of "education" and "technology") refers to hardware and software designed to enhance teacher-led learning in classrooms and improve students' education outcomes.

Behind the scene

Edtechs open new perspectives in teaching/learning to accelerate individualize the process, while making it adapted to different recipients (educatees), all by using advanced technology.

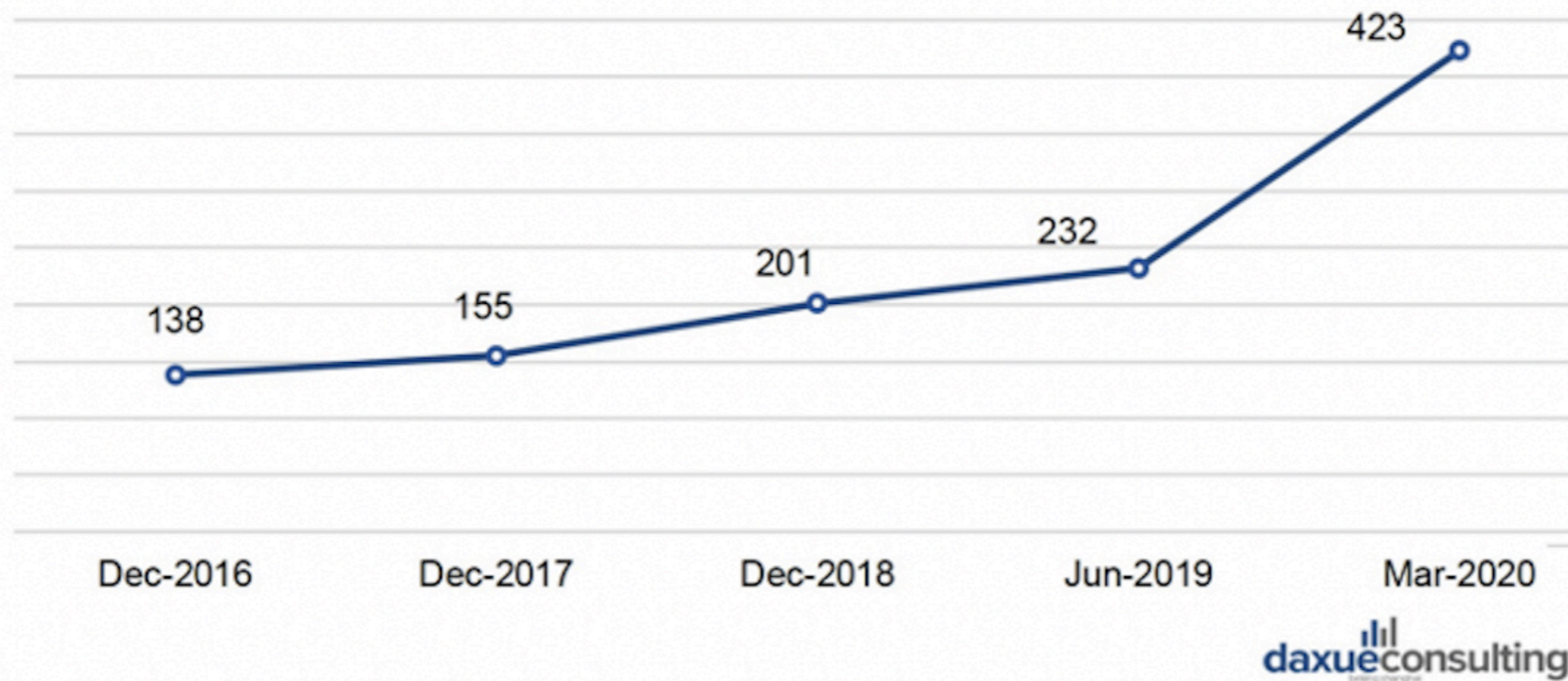


Here are 14 ways to use education technology to enhance learning:

1. Use Digital Classrooms for Organization & Accessibility
2. Create Student-Centered Personalized Instruction
3. Increase Engagement
4. “Ditch” Textbooks & “Flip” Classrooms
5. Differentiate How Students Show Knowledge
6. Teach 21st Century Skills
7. Bring Abstract Experiences to Life with Virtual Reality & Augmented Reality
8. Expand Classroom Walls
9. Teach Digital Citizenship
10. Promote Social Sharing
11. Develop Collaboration Skills
12. Develop Metacognition
13. Enhance Family Engagement
14. Improve Teacher Practice



Total number of online education / training platforms users (million)



[Source: Questmobile, CNNIC]

Source: ~~Daxue~~ Consulting



Figure 9

Hardware Used in Ed-Tech Innovations

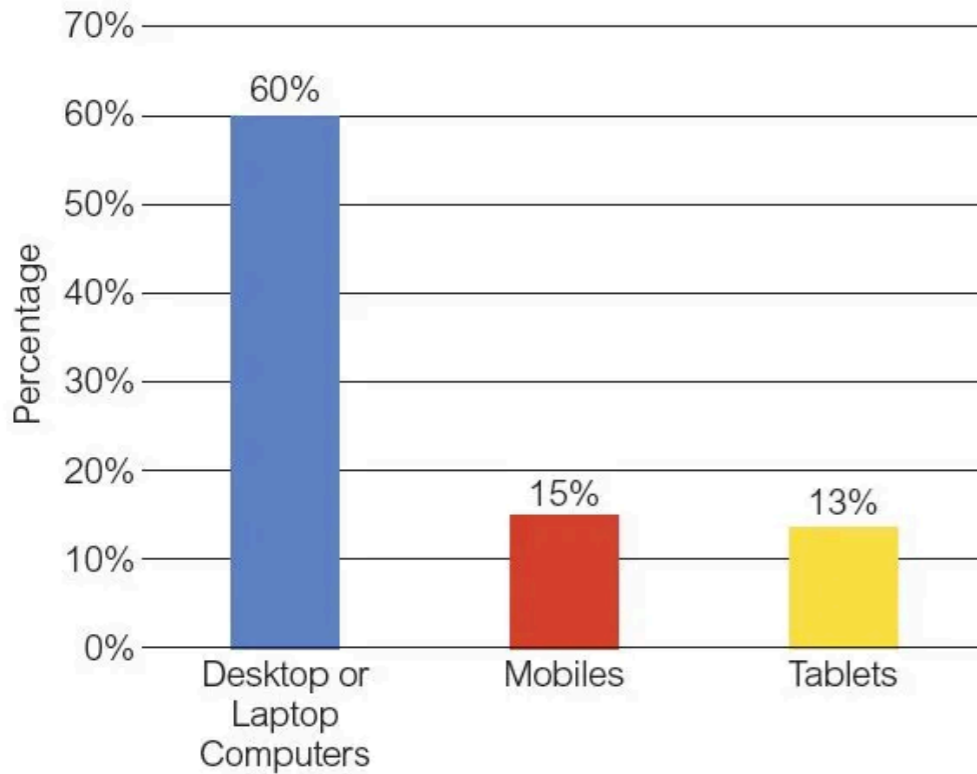
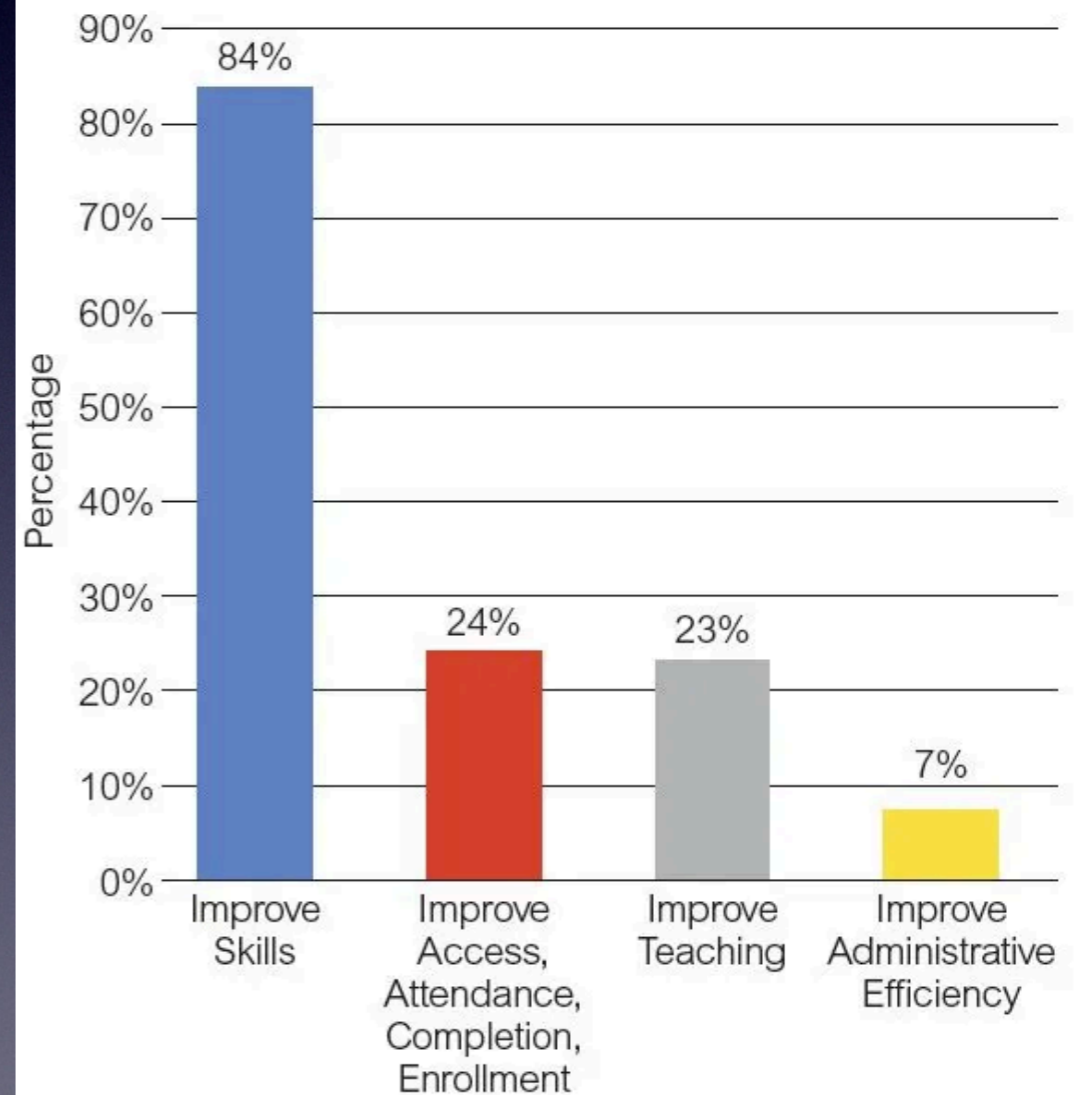
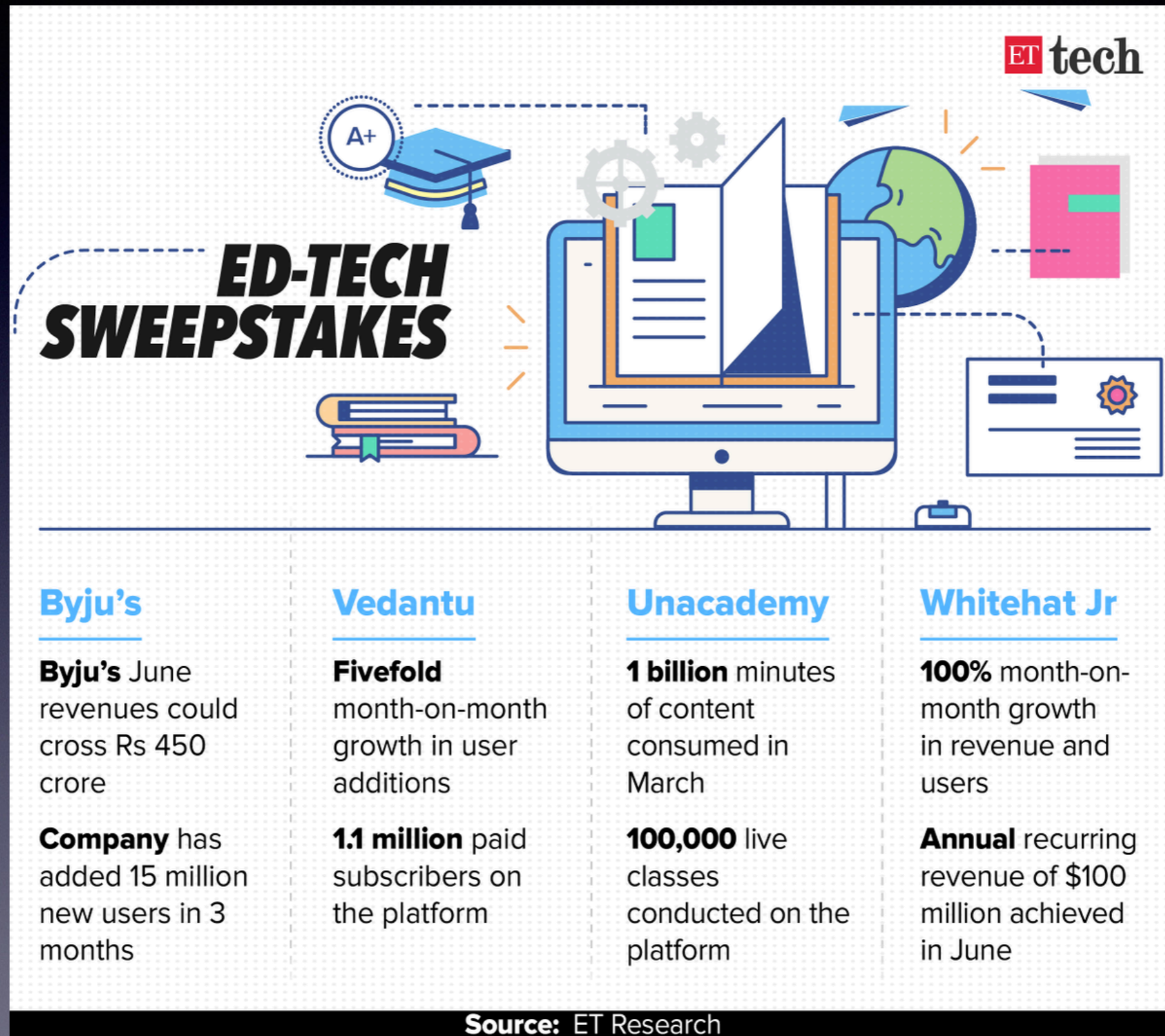


Figure 10

Goals of Ed-Tech Innovations

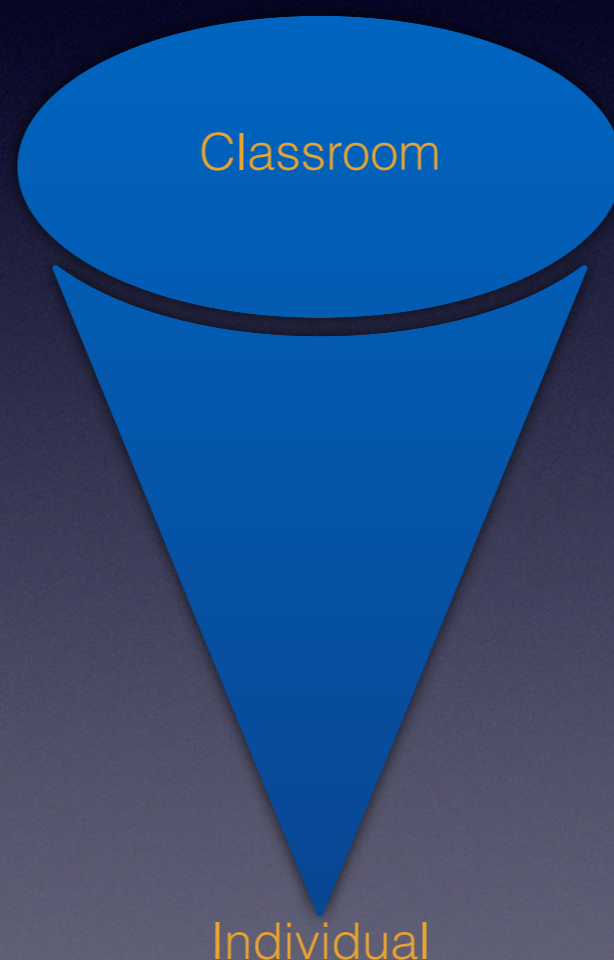






Learning Management System (LMS)

Information System



Learning Content Management System (LCMS)



Digital Pages

rdp. composer

Rápida criação de composições interativas responsivas.

rdp. editor

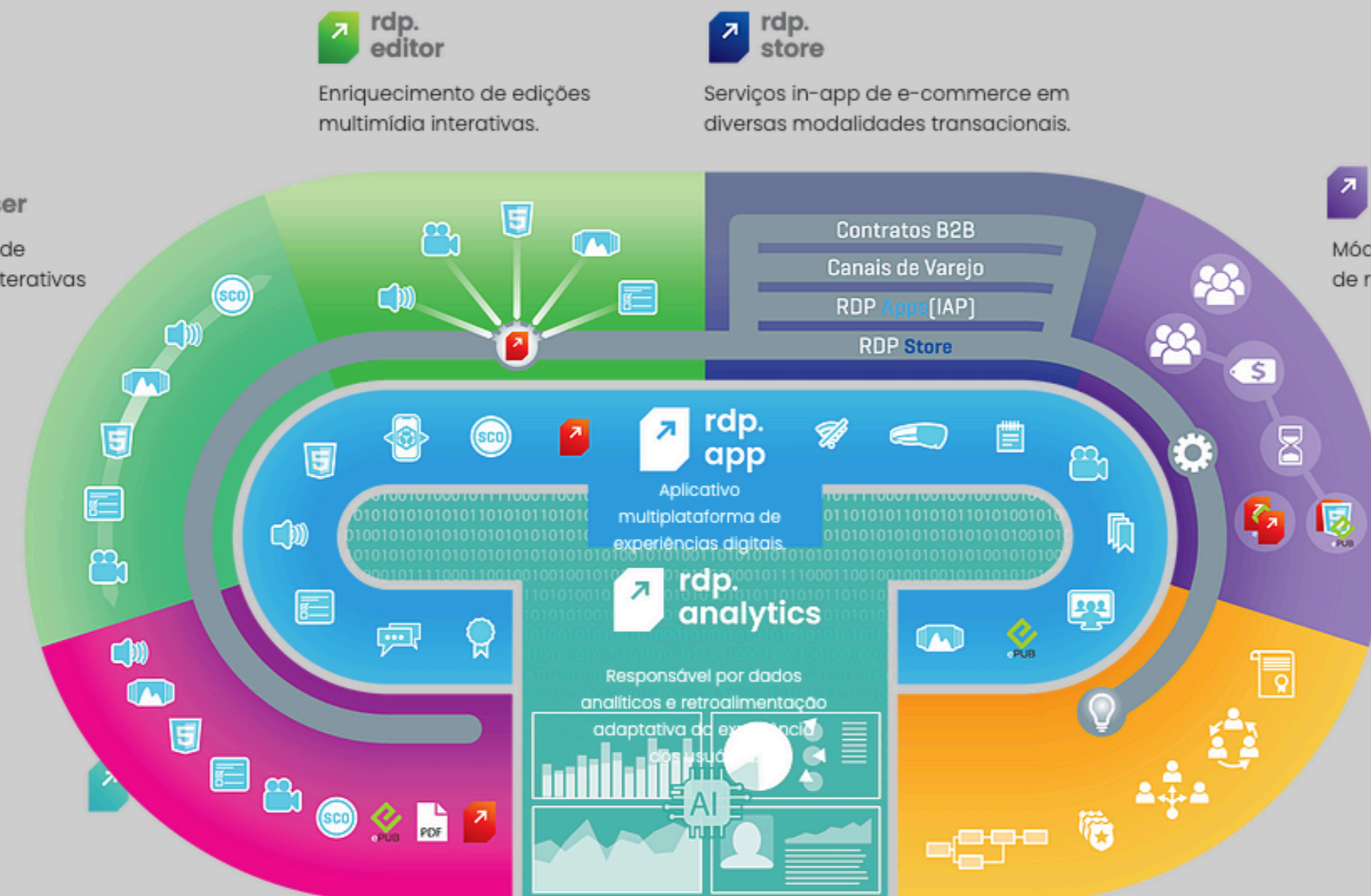
Enriquecimento de edições multimídia interativas.

rdp. store

Serviços in-app de e-commerce em diversas modalidades transacionais.

rdp. manager

Módulo de parametrização de regras de negócio.



rdp. dam

Repositório inteligente para gestão de ativos digitais.

rdp. learning

Módulo de gestão de aprendizagem.



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DADOS

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DEMOGRÁFICO

METODOLOGIA

Nossos
números

429

STARTUPS NA BASE

23

CATEGORIAS

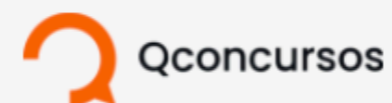
8

NOVAS STARTUPS NO ÚLTIMO
MÊS

87

CIDADES

Nossos
parceiros



+ Cadastrar nova startup



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Agenda

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Across Sectors

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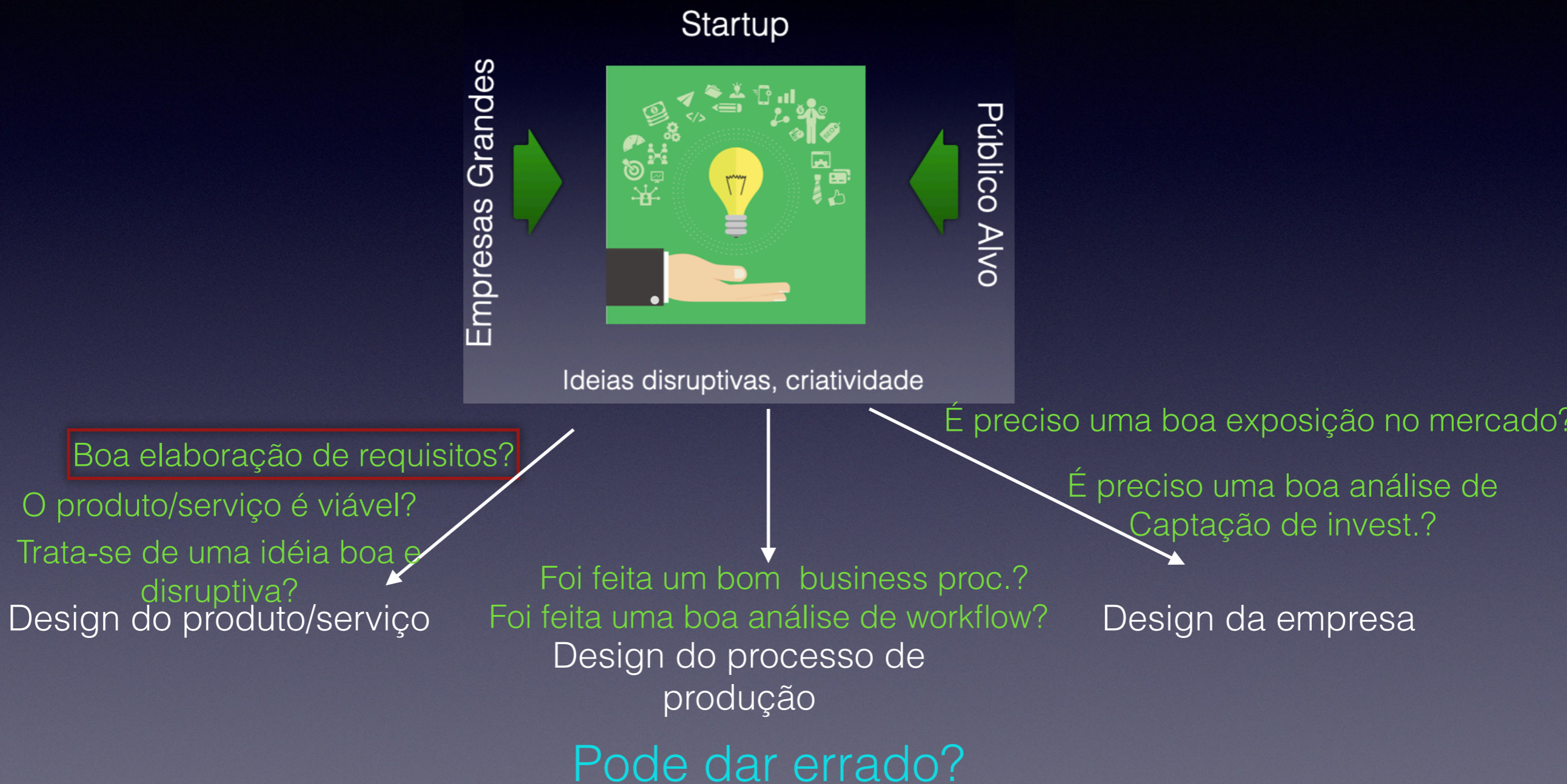
O setor educacional é um dos que mais crescem, mas ligado a novas tecnologias e a novas formas de aprendizado e serviços. Esta demanda por inovação cria um ambiente propício para as edtechs e, mais ainda para as edtech startups.

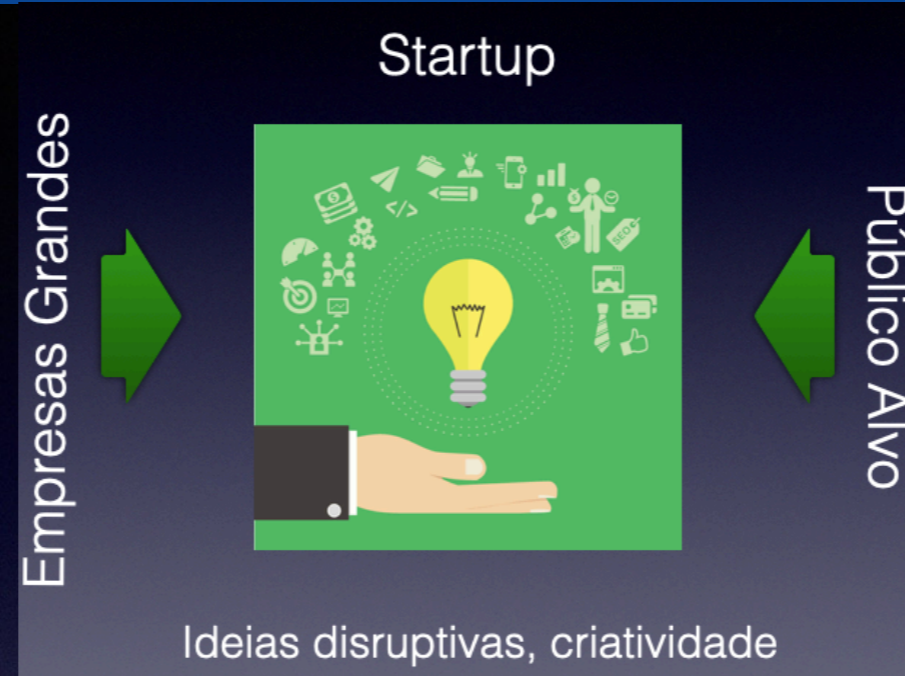


Criando uma startup

CHAPTER 1

The Path to Disaster: A Startup Is Not a Small Version of a Big Company





Boa elaboração de requisitos?
O produto/serviço é viável?
Trata-se de uma idéia boa e disruptiva?
Design do produto/serviço

Nas próximas duas semanas será preciso agora ter uma abordagem mais formal para a tech startup (entregar no dia 18 de novembro).



O que é um bom requisito?



Figure 1 – Iron Triangle



A maioria dos trabalhos, experiências e boas práticas que tratam de requisitos para startups e tech startups estão ligados a startups de software.

Suresh Gyan Vihar University,
Jaipur International Journal of Converging Technologies and Management (IJCTM)
Volume 1, Issue 2, 2015
ISSN: 2455-7528

Agile Adoption in Tech Startups Our Findings

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Abstract—There has been a rise in the adoption of agile methodology within the software development community. Organizations both large scale and small scale are opting to use agile methodology realizing the benefit it offers over traditional models. However when it comes to a small scale mobile centric tech startup, their needs and goals may be entirely different from large corporations. The research in this paper presents a comparison of existing process models, their advantages, limitations in the context of a small scale mobile centric tech startup and suggests improvements to the rigorous Agile methodology which is currently followed. The findings of this paper are presented in the form of a case study of a similar startup where they have interned and adopted the suggested methodology.

Keywords—Agile Methodology, Lean Startup, Critical Path, small scale mobile centric tech startup.

I. INTRODUCTION

In recent years, there has been a spike in entrepreneurship. Startups are recognizing the importance of technology to reach out to more customers. In keeping with the importance of mobility in today's world, many startups are focusing on developing applications to support their business, for mobile platforms. The work dynamics and development processes followed in a startup could be different from those in a large corporation, because the needs and objectives of a startup can be vastly different from their ultimate vision. For a startup whose main focus is on technology, following a rigid model such as traditional waterfall model is very difficult.

Many startups are adopting agile methodology for their software development purposes, because it is more adaptable to their constantly changing needs. Agile methodology has

Agile methodology is defined as one that follows all the Agile principles, for the purposes of this paper.

A startup involving a team of 10 or fewer members - including the business side - focused on developing mobile applications is considered to be a small scale tech startup for this paper. With a rise in the number of startups focusing on providing services via mobile, they are a good focus group to base this research on.

The improvements suggested in this paper is based on the development approach which was actually followed by the authors for a startup. These improvements cater to both the business and technical needs of the startup.

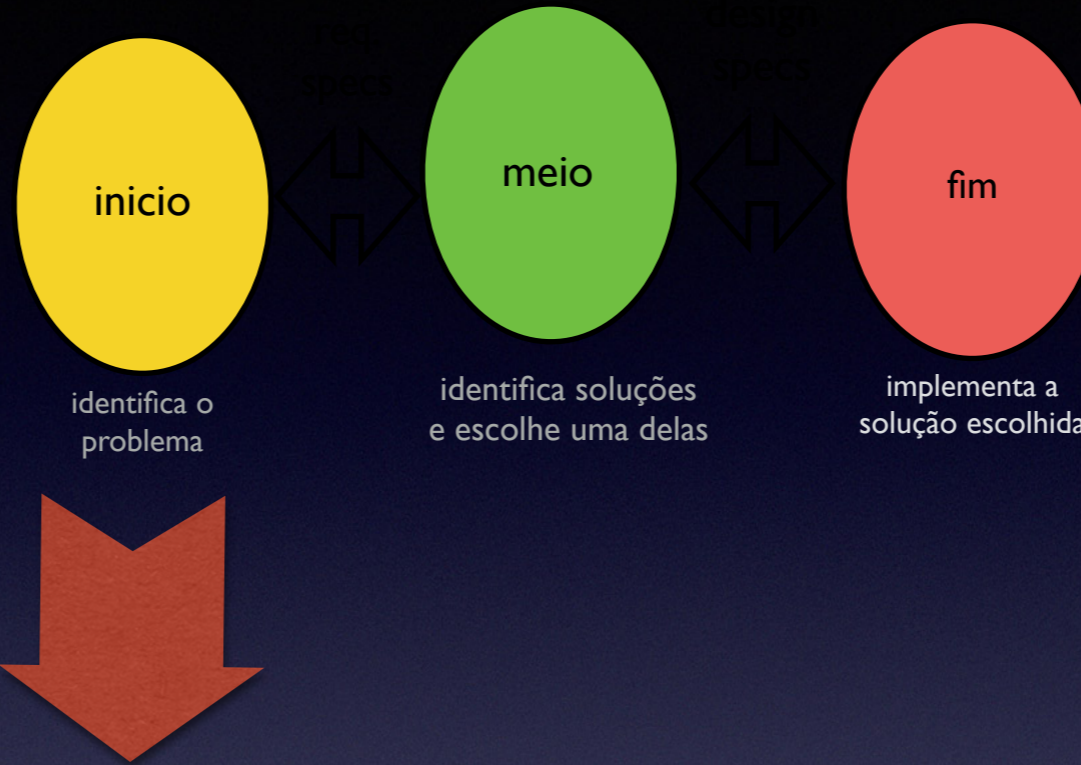
Section II describes the metrics which are commonly used by startups to judge the development effort. Section III describes the agile model and its benefits and limitations. Section IV then describes Lean Startup methodology and its limitations. Section V describes the case study which acts as the basis of the proposed system and the proposed system itself. Section VI is the conclusion, followed by the acknowledgement in section VII.

Abbreviations:

JBGE - Just barely good enough
MVP - Minimal Viable Product
CP - Critical Path
USP - Unique Selling Point

II. METRICS

The metrics used to determine the project's success are



Escopo

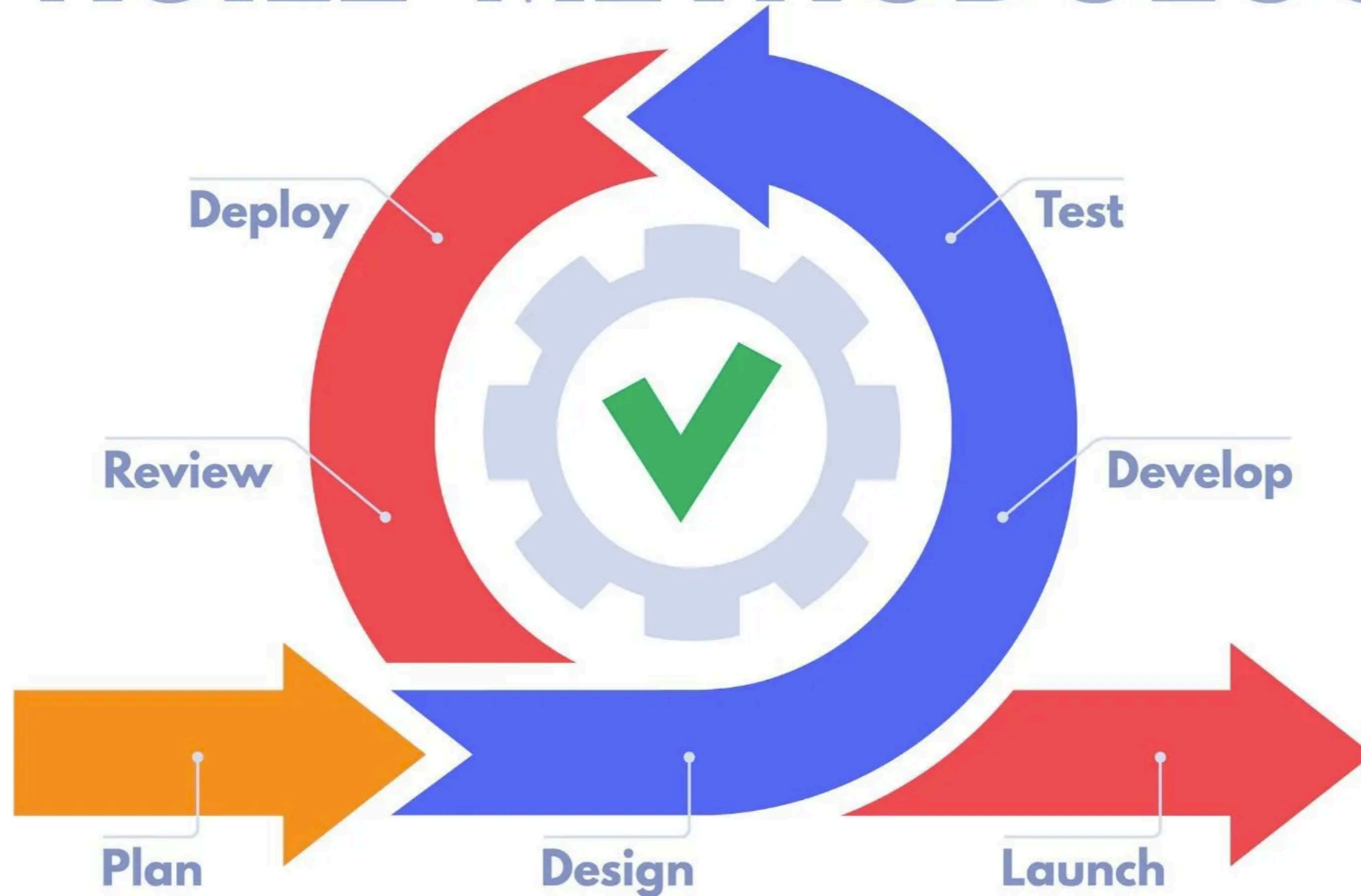
Identificação do problema
 Público alvo - modelo
 Tecnologia disponível
 Concorrentes e coadjuvantes

Modelagem do público-alvo Jornada do usuário





AGILE METHODOLOGY





Benefits of Agile(with respect to a startup) :

1. Daily meetings can ensure smooth communication between team members and decreases time and development costs.
2. Pre-sprint planning helps the team narrow down their todo list and focus on the immediate goal. In startups, where the final product is not fully defined it is easy for developers to fall into the trap of developing too many features.
3. Encourages test-driven development and suggests that the developers write acceptance test for their code before they implement the features.
4. Quality of software is also improved not only because of the decrease in bugs and faults in the software but also because of improved maintainability of the software.



Limitations of Agile

1. Setting a strict sprint for deliverables is difficult since the sprint may be set by someone who is not aware of the challenges which could arise in development.
2. Many a times startups are trying to break into markets with existing players in which case it is necessary for them to be creative in their product to define their USP. This get limited when sprints are considered.
3. Startups with limited resources may not have a certified scrum master to conduct the meetings and to provide a direction in the project. In such a case it becomes difficult to conduct these meetings.
4. A small scale startup has a limited number of developers, a list of features that is probably being changed and refined constantly and a limited amount of time and money.



A balance needs to be achieved between quality, time and cost for a small scale startup. In a small scale mobile centric tech startup at Fixy, the authors have observed that it was very difficult to be able to achieve the full advantages of using an agile model due to the paucity of resources, and small team size. The authors have observed how agile fails to provide an affordable solution for all problems faced by a small mobile centric company like Fixy, and have suggested some improvements to the process



Cite as:

J Melegati, A Goldman, F Kon, X Wang. A model of requirements engineering in software startups in Information and Software Technology, Volume 109, pp. 92-107, 2019.

A model of Requirements Engineering in Software Startups

Jorge Melegati^a, Alfredo Goldman^b, Fabio Kon^b, Xiaofeng Wang^a

^a*Faculty of Computer Science - Free University of Bozen-Bolzano*

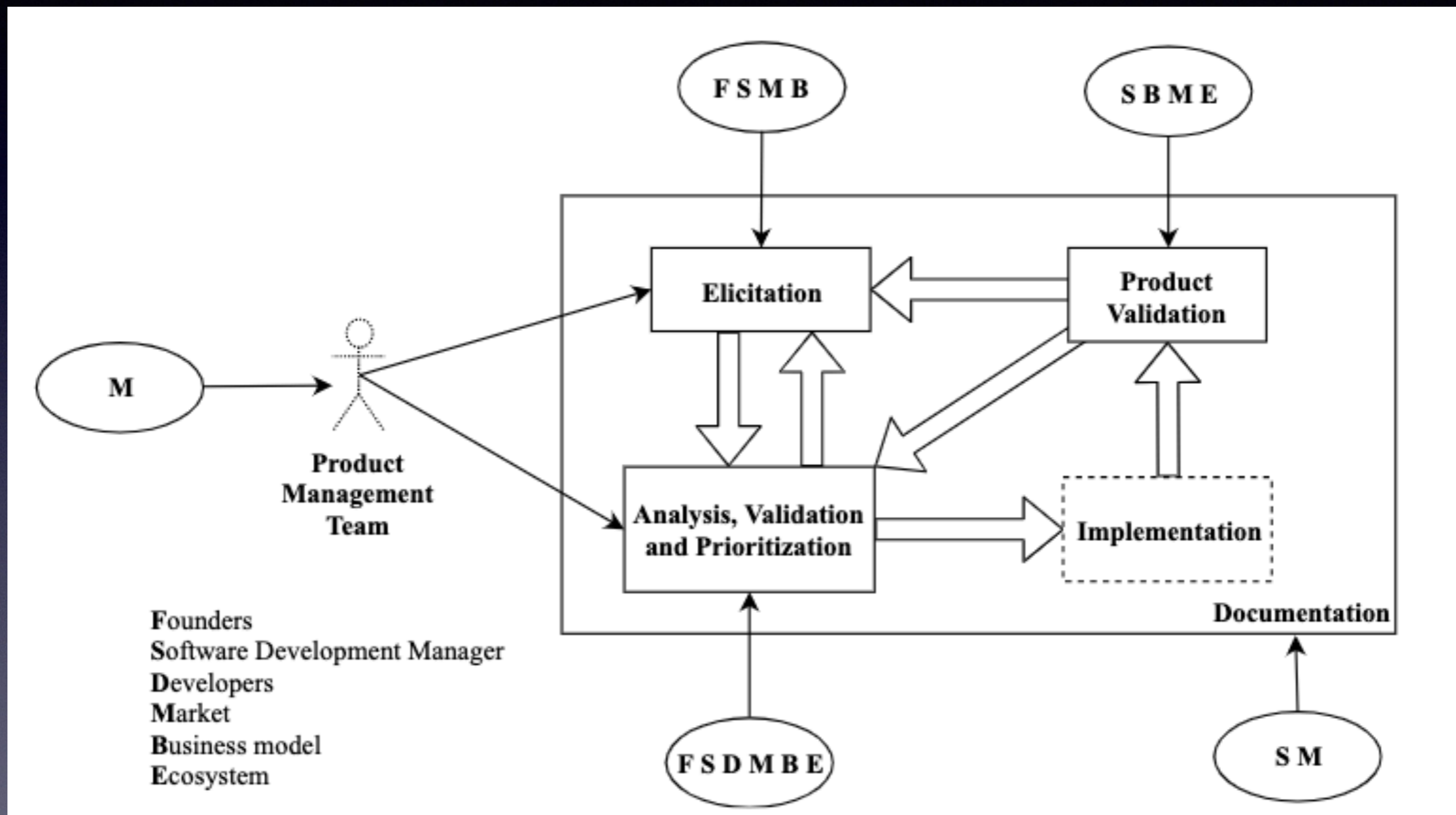
^b*Department of Computer Science - University of São Paulo*

Abstract

Context: Over the past 20 years, software startups have created many products that have changed human life. Since these companies are creating brand-new products or services, requirements are difficult to gather and highly volatile. Although scientific interest in software development in this context has increased, the studies on requirements engineering in software startups are still scarce and mostly focused on elicitation activities. **Objective:** This study overcomes this gap by answering how requirements engineering practices are performed in this context. **Method:** We conducted a grounded theory study based on 17 interviews with software startups practitioners. **Results:** We constructed a model to show that software startups do not follow a single set of practices but, instead, build a custom process, changed throughout the development of the company, combining different practices according to a set of influences (Founders, Software Development Manager, Developers, Market, Business Model and Startup Ecosystem). **Conclusion:** Our findings show that requirements engineering activities in software startups are similar to those in agile teams, but some steps vary as a consequence of the lack of an accessible customer.

Keywords:

software startups, requirements engineering, empirical software engineering, customer development, product validation





This study has characterized the evolution of requirements practices in software startups along six interrelated dimensions. Progress along these dimensions reflects improved ability by a company to reliably deliver high quality products to customers, to manage requirements more effectively, and to add staff to do so.

????



Esse argumento precisa ser melhor avaliado. As poucas pesquisas sistemáticas (além da experiência prática) mostram que startups, e especialmente tech startups evoluem sem uma boa análise de requisitos para depois investirem no “tempo perdido”. Será essa uma boa estratégia?





O “tamanho” da startup justifica a falta de planejamento?



1302652606



Parece claro que abordagens estritamente funcionais requerem equipes maiores, mais disciplina, equilíbrio de “viewpoints”, equipe especializada (inclusive na documentação) e maior “tempo” de maturação.





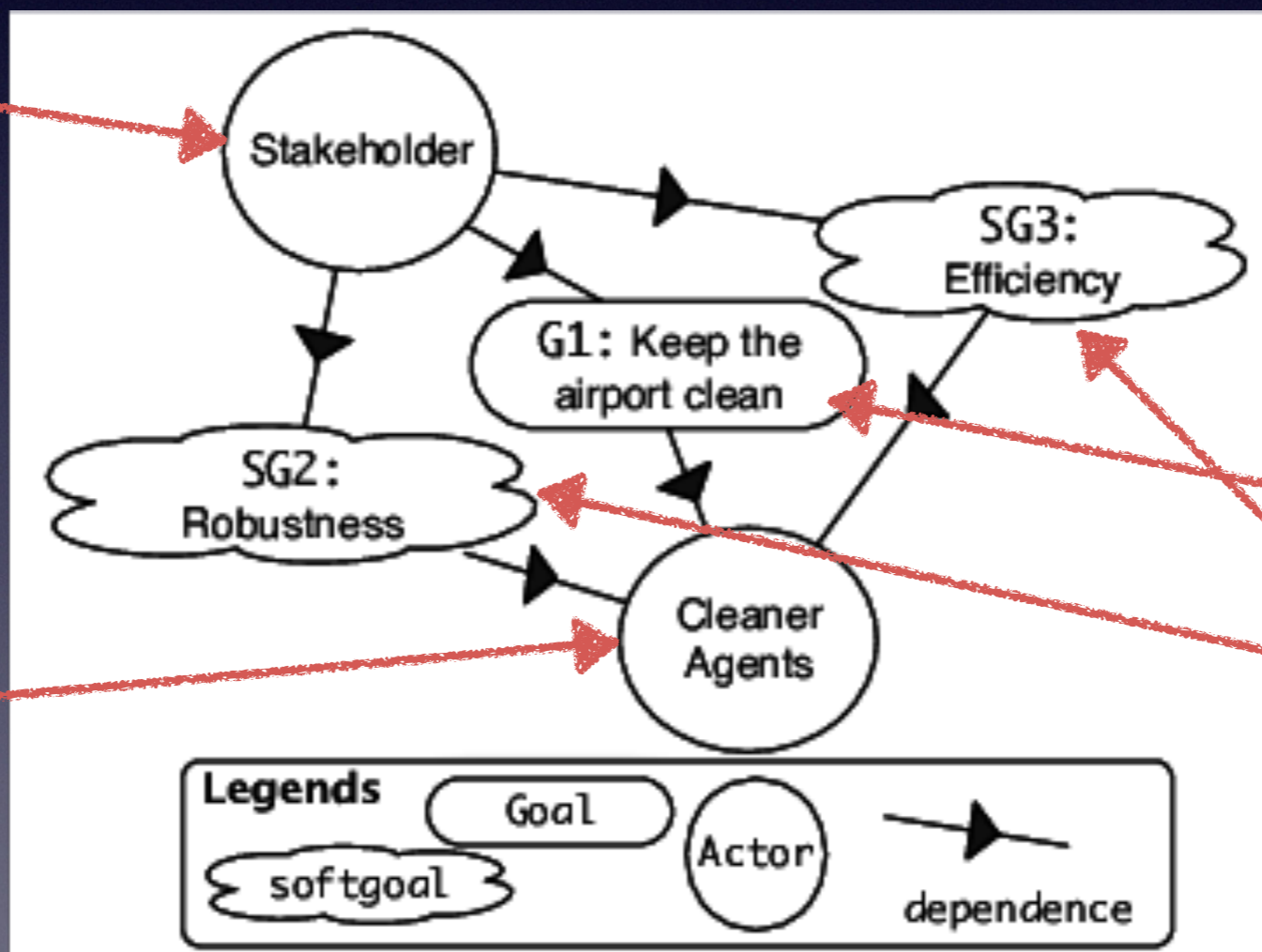
Outro problema recorrente é a dispersão, levando a “desenvolvimentos rápidos” em reuniões de equipe com resultados pífios ou nulos. O problema é a falta de planejamento e avaliação sistemática.





Uma alternativa é fazer optar por uma modelagem de requisitos baseada em objetivos.

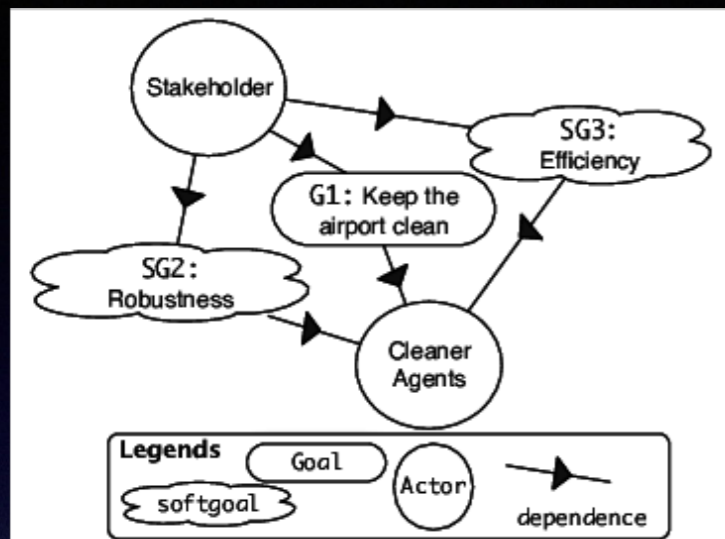
Modelos do público-alvo



Agentes responsáveis

Foco do produto/serviço

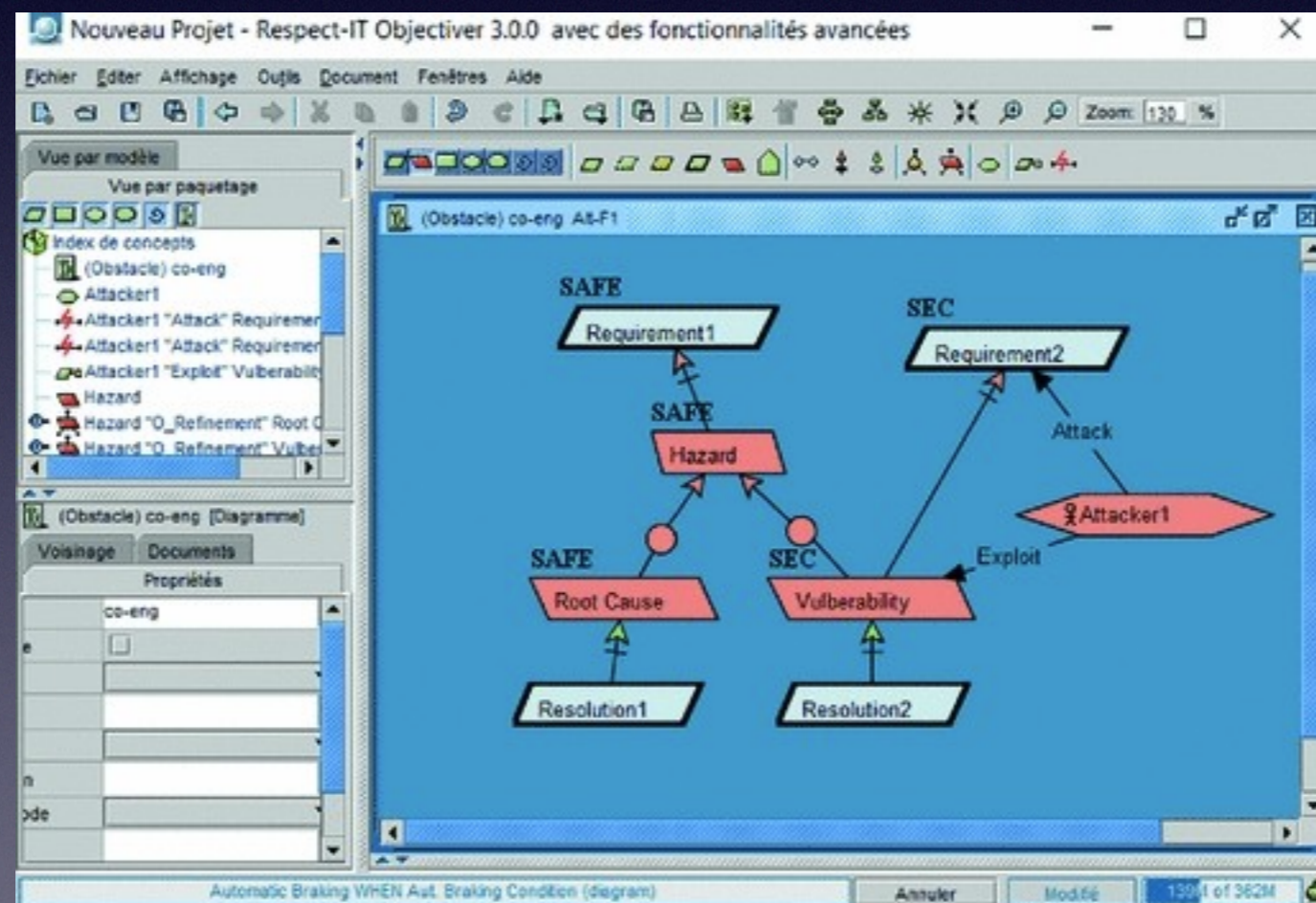
Sub-objetivos ou características desejadas



Objetivos podem colapsar requisitos funcionais e não funcionais em uma primeira abordagem, liberando a tech startup da necessidade de gente especializada, de uma equipe maior, ou até de mais tempo de análise. Entretanto, se a opção for por não usar uma ferramenta de apoio é preciso criar uma disciplina de modelagem “manual”.



Caso a opção seja por “investir” em uma ferramenta mais leve de apoio (que rode em um notebook), teria o Objectiver, da RESPECT-IT.





http://www.objectiver.com/index.php

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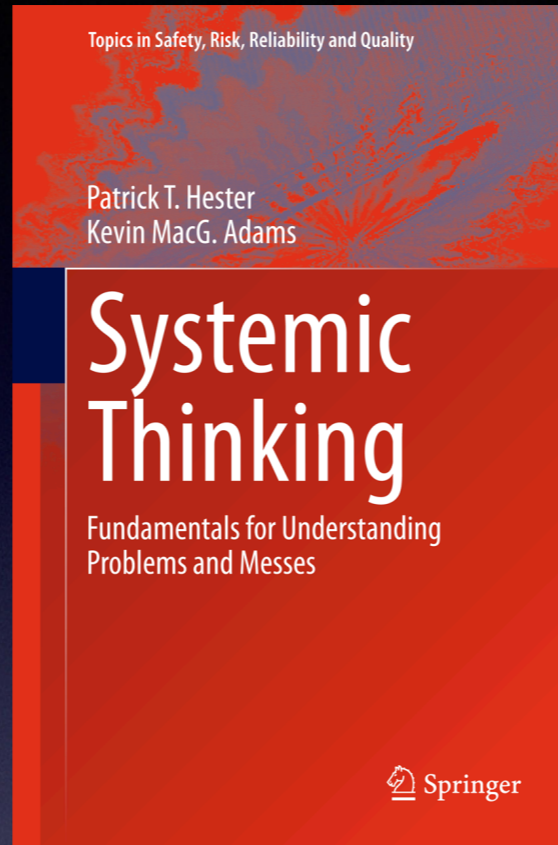
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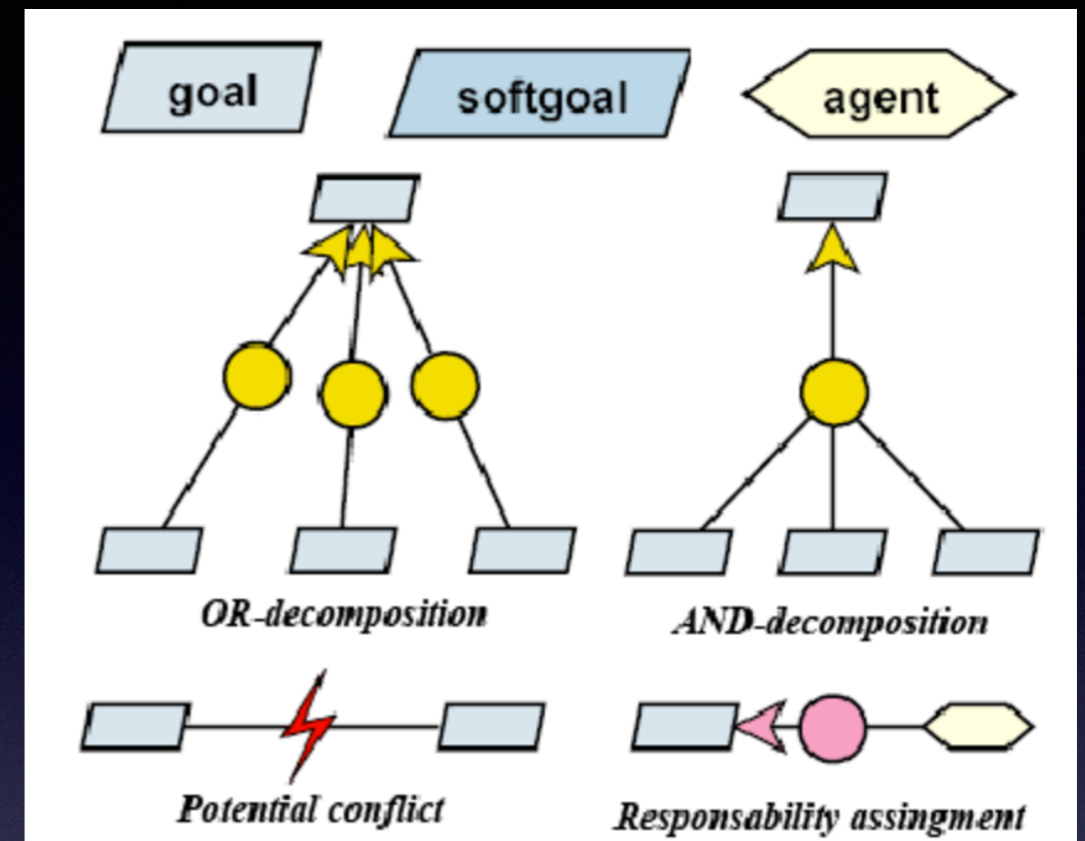
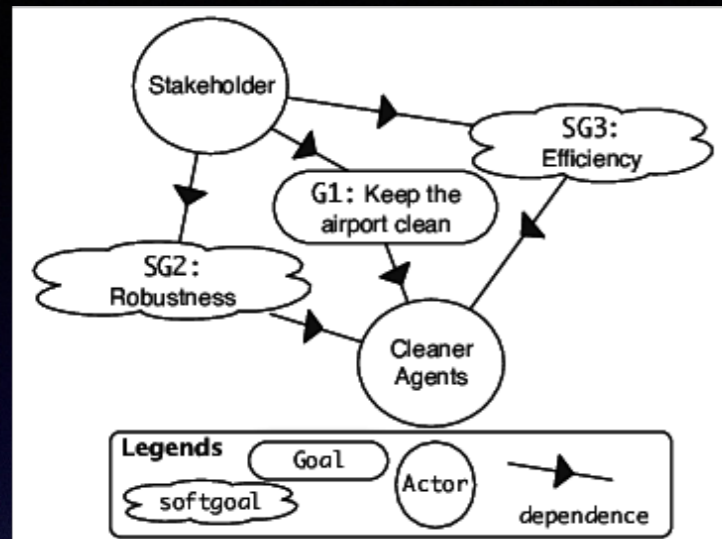
OBJECTIVER RELEASE 3.0c47 (Win), 3.0c47 (Mac), 3.0c35 (Linux)	WHO'S WHO	OBJECTIVER VIRTUAL ACADEMY
A free trial version of Objectiver V3 can be downloaded .	Objectiver is owned by Respect-IT, a spin-out of the University of Louvain.	June 7th, 2011.
Current users can download the upgrade from the Download page .	Respect-IT is an acronym standing for R equirements E ngineering and S PECification T echniques for I nformation T echnology.	The Objectiver Virtual Academy is now open. This elearning site invites you to become acquainted with goal orientation and with Objectiver in a few days of training only.
You can see a demo of the main functionalities of Objectiver V3.		Follow the link to get more details on this novel concept.
		Objectiver is based on a method described in a reference book recently published by Wiley.



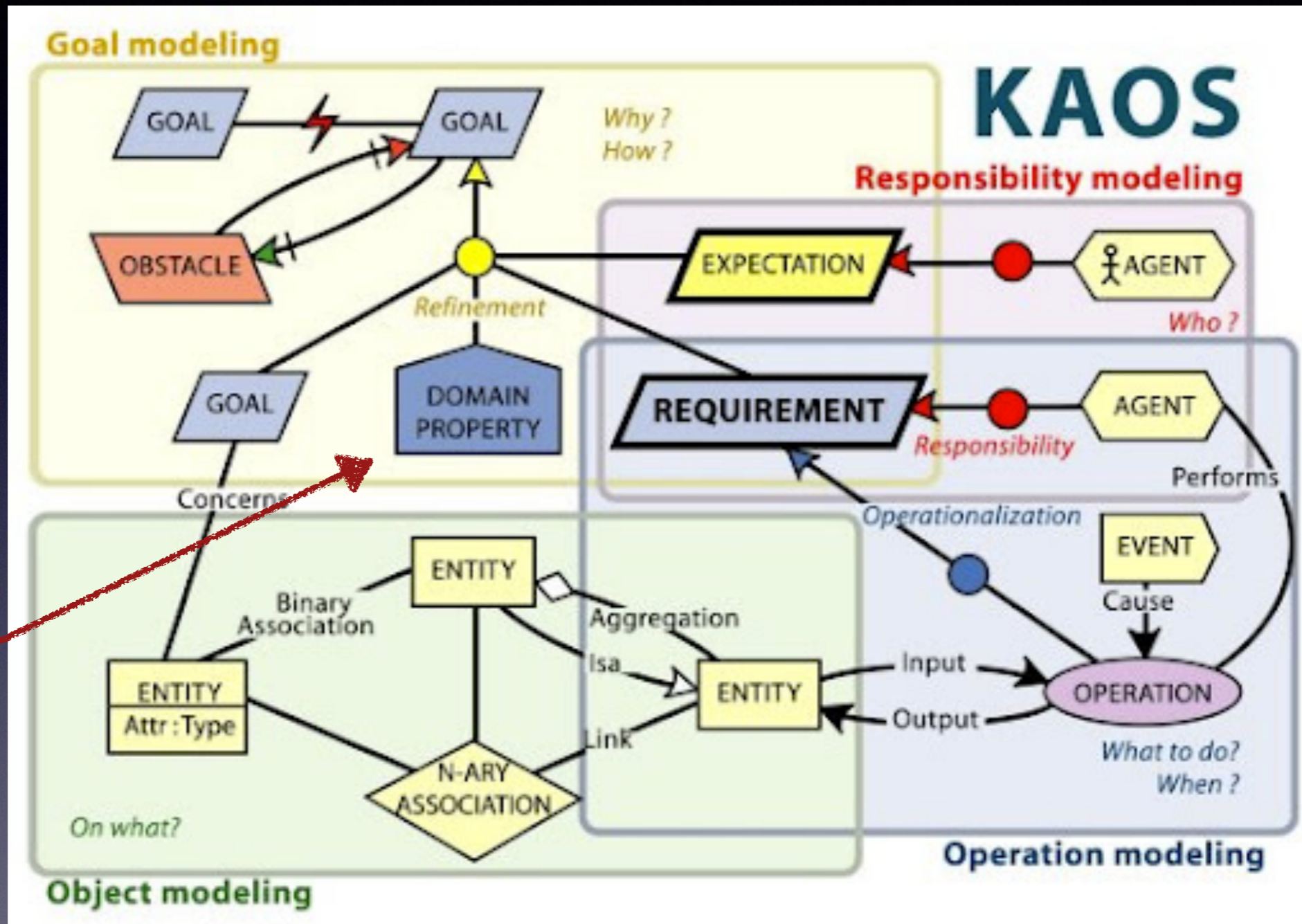
O grande desafio é “cultural”: fomos todos treinados implícita e explicitamente para trabalhar com funcionalidade, especialmente em engenharia.



O pensamento sistêmico (como discutimos nas aulas 4 e 5) pode resultar em uma abordagem mais abrangente, levando em conta o domínio de aplicação, os agentes (e empresas) concorrentes, colaborativas, e componentes.



Na abordagem sistêmica a tech startup tem um objetivo sistêmico (global) que deve estar baseado em subgoals que usam recursos (objetos) sob a responsabilidade de agentes (máquinas ou pessoas). É essencial saber que agente é responsável pelo requisito/objetivo para poder programar as rotinas de teste, e eventualmente pilotar.





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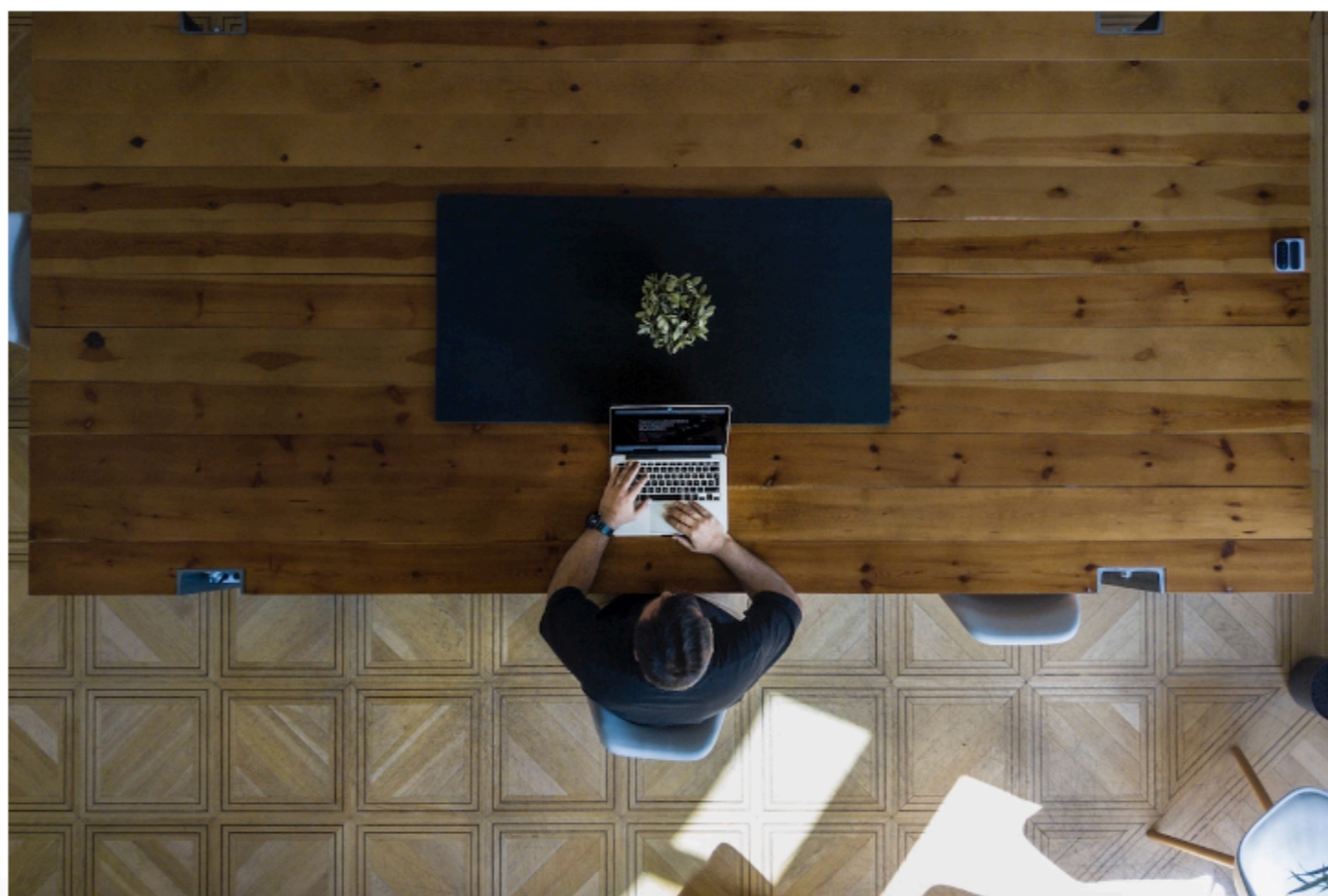
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20 April 2022

Actionable 7-Step Guide to Start a Tech Company (With No Money)

Written by **Robbie Richards**

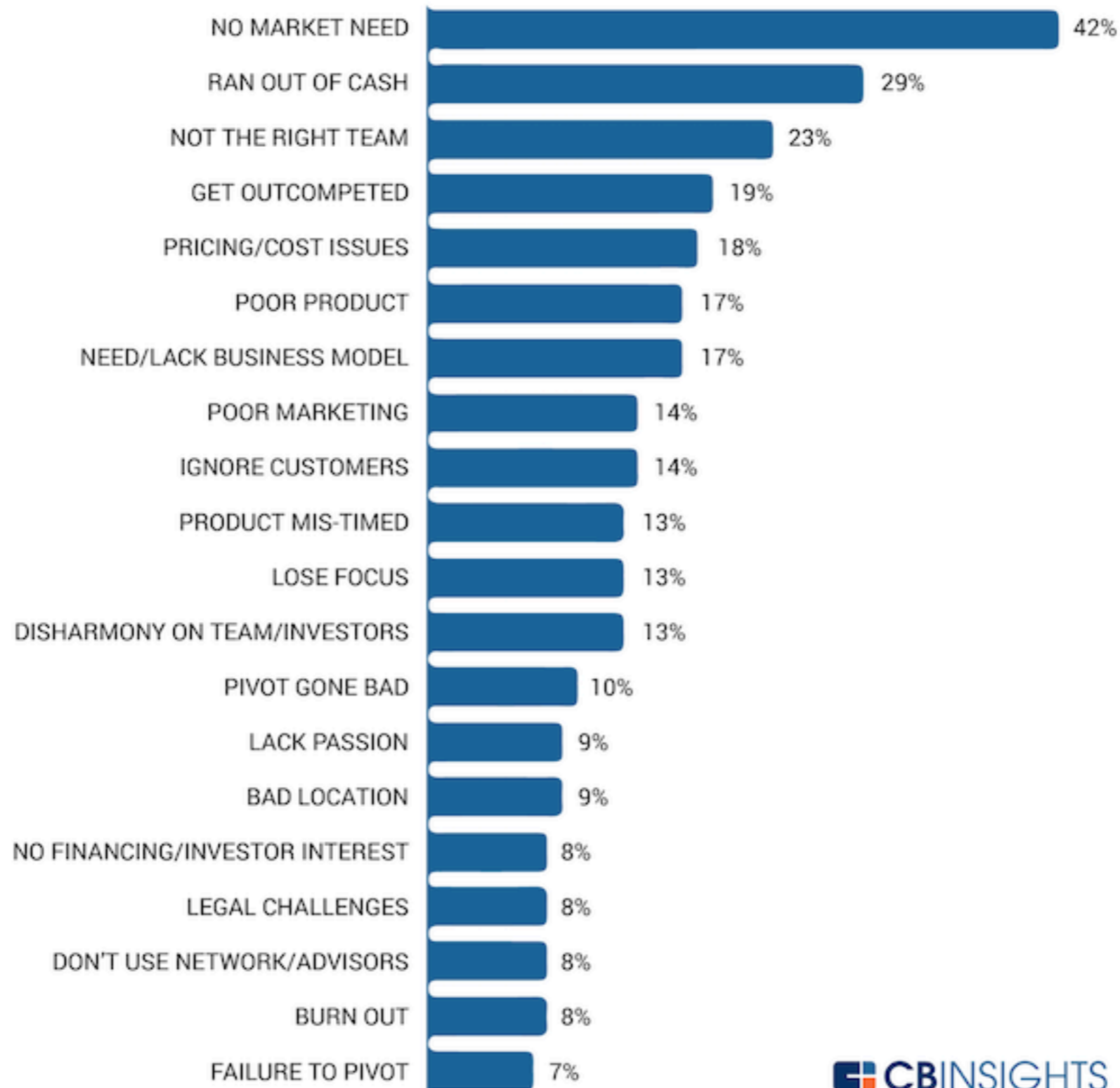




<https://masschallenge.org/article/how-to-start-a-tech-company>

THE TOP 20 REASONS STARTUPS FAIL

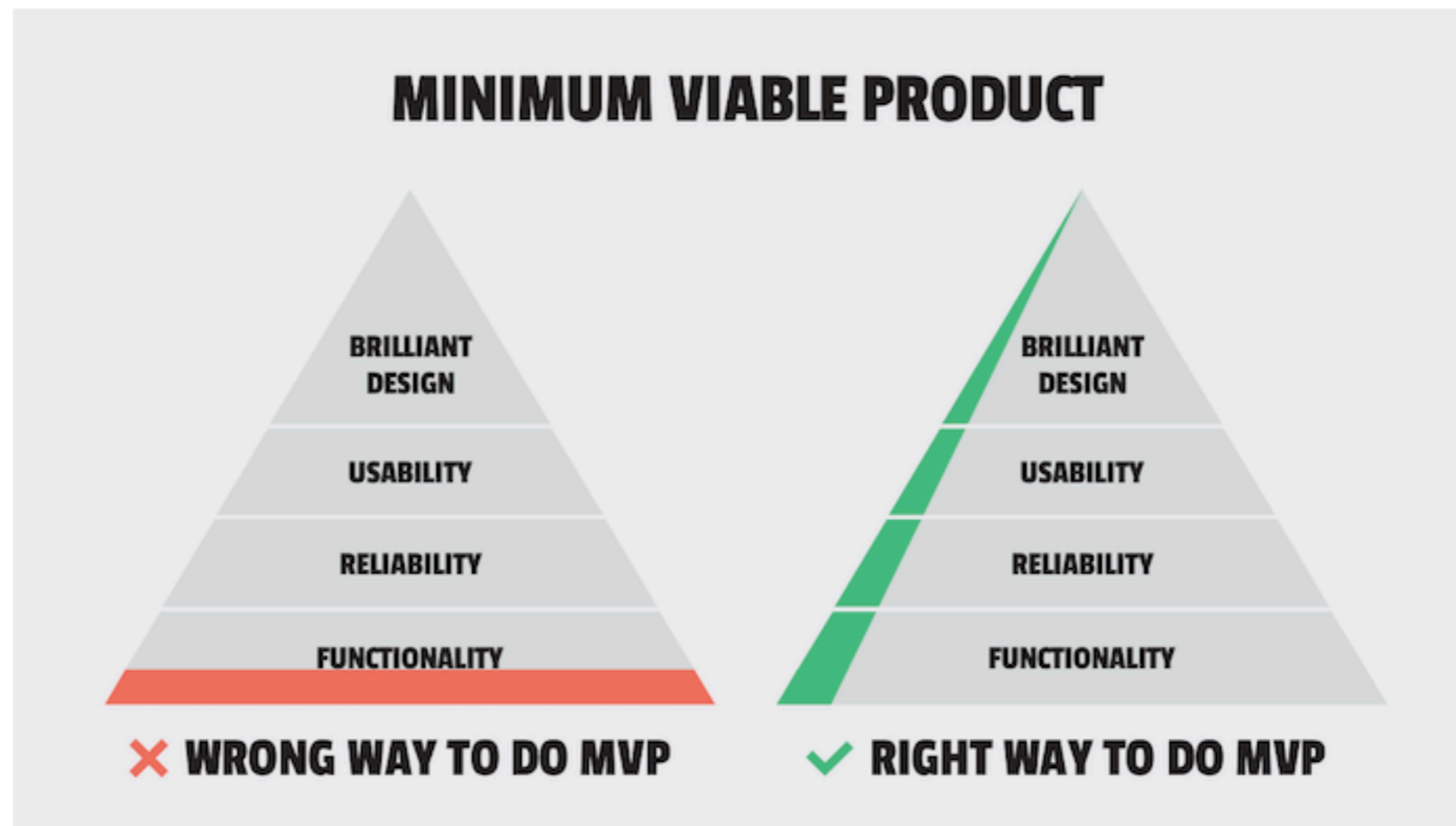
Based on an Analysis of 101 Startup Post-Mortems





7 Steps to Build a Successful Tech Company

#1. SHORTLIST THE CORE FEATURES OF AN MVP



Most great startup ideas are the result of a founder being unable to find a good solution to their pain. In the [words](#) of Paul Graham:



Perguntas?