بسم الله الرحمن الرحیم

در مسیر کارآفرینی دانش بنیان

جلسه ی چهارم:

مسایلی که ارزش حل کردن دارند

رضا لطفی
استاد گروه مهندسی برق دانشگاه فردوسی مشهد
و رییس بنیاد نخبگان خراسان رضوی

۲۸ تیر ۱۴۰۰

إِنَّ اللَّهَ لَا يُغَيِّرُ مَا بِقَوْمٍ حَتَّى يُغَيِّرُوا مَا بِأَنفُسِهِمْ

سوره رعد

خدا حال هیچ قومی را دگرگون نخواهد کرد

تا زمانی که خود آن قوم حالشان را تغییر دهند

هدف از برگزاری این نشست ها

- هم می توانیم و هم باید «بیشتر» ارزش آفرین باشیم.
- مهمترین ضعف ما در این مسیر، عدم آشنایی کافی ما با «طرز فکر کارآفرین» و «مسیر کارآفرینی دانش بنیان» هست.

• تغییر چیزی نیست که همراه با یک چک لیست بیاید. در دنیایی زندگی می کنیم که بادها و دریا دائما در حال تغییر هستند و گنج دو بار در یک مکان پنهان نمی شود. در عوض، آنچه ما در اختیار داریم، یک قطب نما است.

• وظیفه ی ما ایجاد طرز فکر، فرهنگ و روابطی است تا انسانهای داخل سیستممان به گونه ای توانمند شوند که بخواهند و بتوانند که بادبانها را در هر شرایط آب و هوایی در جهت جدید و صحیح تنظیم کنند.

از مقدمه ی ناشر در کتاب
The Innovator's Mindset

در مسیر کارآفرینی دانش بنیان: "مسائلی که ارزش حل کردن دارند"

سرفصل مطالب این هشت جلسه ان شاء الله

1. طرز فکر و طرز فکر رشد
2. نوآفرینی و طرز فکر نوآفرینی
3. Design thinking
4. از ایده شروع کنیم یا از مساله؟ چه مسائلی ارزش حل کردن دارند؟
5. بوم کسب و کار و بوم نوآفرینی
6. خلاقیت و حل خلاقانه ی مسائل
7. ویژگی های یک تیم خوب / هنر جذب سرمایه
8. فرهنگ کار / آنچه در دانشگاه نمی آموزیم

سرفصل مطالب

- از ایده شروع کنیم یا از مساله؟
- مسائلی که ارزش حل کردن دارند
- هفت سوالی که باید پاسخشان را بدانیم
- سرمایه گذاران BSMF چه سوالاتی می پرسند؟
- جمع بندی

Ideas Don't Matter. What I Understand After 20 Years Of Innovation

Hod Fleishman Contributor ⓘ
Leadership Strategy

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Ideas Don't Matter. What I Understand After 20 Years Of Innovation

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Leadership Strategy

Not sure how to come up with the next *big business idea?* Don't worry about it. Ideas are not that important. Better to focus on:

1. Constraining the problem you are trying to solve

2. Understanding what technologies are available to help solve the problem

3. Continuously interact with the problem, be brave and pivot if needed

4. Executing really, really, well

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Steve Jobs: "If you really look closely, more overnight successes took a long time."

Business ideas don't come from a magical repository but from performing an *activity*. And the activity that brings ideas to the light of day is that of **solving well-defined problems**—the more defined and constrained the problem, the better.

Ideas Don't Matter. What I Understand After 20 Years Of Innovation

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Leadership Strategy

- Find a problem and actively try and solve that problem. And it can't be any problem; it needs to be a ***well-defined*** problem.

- When we say we "have an idea," **rarely do we mean that it encapsulates a solution for all of these challenges.**

- To this end, *an idea is just the very start of a journey.* And as the journey continues, more of these problems will be answered, and as a result, the so-called "idea" will change and evolve.

Ideas Don't Matter. What I Understand After 20 Years Of Innovation

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- An idea at the end of the day is just an assumption of how things will work.

- As we move from an idea to a **Proof of Concept**, a **Minimum Viable Product**, **Alpha, and Beta releases**, we learn more about the solution and the problem.

- As a result, **the "idea" changes**.

- So don't get so hung up on having a "great idea" before you start. Just look for a starting point good enough to start taking a stab at the problem; better and improved versions will arrive by **interacting further with the problem**.

Ideas Don't Matter. What I Understand After 20 Years Of Innovation

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Leadership Strategy

- *Ideas are only as good as the path they set you on, and the distance you will travel on this path is only as long as your ability to define problems, understand the technology, and execute.*

- Without understanding the problem at hand, without understanding what tools are available and executing extremely well, the path will be a very short one.

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10 TYPES OF PIVOTS

Pivot: "a structured course correction designed to test a new fundamental hypothesis about the product, strategy, and engine of growth."

1 Zoom-in
Refocusing the product on what previously had been considered just one feature of a larger whole

2 Zoom-out
What was considered the whole product becomes a single feature of a much larger product

3 Customer segment
Product solves a real problem but for different customers (e.g. early adopters to mainstream market)

4 Customer need
The target customer has a problem worth solving, just not the one originally anticipated

5 Platform
A change from an application to a platform or vice versa

6 Business architecture
Switching architectures (e.g. from high margin / low volume to mass market; or vice versa)

7 Value capture
Changes to the way a company captures value (can have far-reaching consequences for the business, product, and marketing strategies)

8 Engine of growth
Seeking faster or more profitable growth (commonly also requires a change in the way value is captured)

9 Channel
The same solution delivered more effectively through a different channel (impacts price, features, and competitive landscape)

10 Technology
Discovering a way to achieve the same solution by using a completely different technology

سرفصل مطالب

- از ایده شروع کنیم یا از مساله؟
- *مسائلی که ارزش حل کردن دارند*
- هفت سوالی که باید پاسخشان را بدانیم
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How to Identify Problems Worth Solving

How to identify problems worth solving

Published on August 28, 2019

Andreas von Criegern
Das JTBD Playbook | jobs-to-be-done.ch

4 articles + Follow

در مسیر کارآفرینی دانش بنیان: "مسائلی که ارزش حل کردن دارند"

How to Identify Problems Worth Solving

- 43% of all startups fail: solutions nobody is willing to pay for

- 95% of all new products are not accepted by consumers

- Companies obviously develop products nobody wants
  - they are not addressing a relevant problem in the life of their customers

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How to Identify Problems Worth Solving

- Many companies respond to this challenge by
  - establishing innovation labs, by launching idea campaigns, sending their employees to pitching events and conducting design sprints.
- However, often only existing products and processes are optimized and made more customer-friendly
  - which is actually an *improvement*.
- Real *innovation* happens, where a problem is addressed with a different and much better solution than before.

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How to Identify Problems Worth Solving

- The main reason for this shortcoming lies in *flawed* innovation processes.

- You
  - *First,* need to understand customer needs (and their underlying problems)
  - *then,* to deduce appropriate solutions.

- But instead, many start-ups and companies test the *technical feasibility,* before validating the marketability of their solution, which is often leading to failure.

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How to Identify Problems Worth Solving

- *«You've got to start with the customer experience and work backwards to the technology. You cannot start with the technology and try to figure out where you are going to sell it.» (Steve Jobs)*

- Companies today gain ***a real competitive advantage*** by recognizing the relevant problems of their customers first, and **then** delivering better solutions than their competitors.

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How to Identify Problems Worth Solving

Examples

IKEA: furnishing a new apartment in one day.

- This problem cannot be addressed just on a functional level (offering furniture).
- The solution needs additional components:
  - having all necessary furniture for the different rooms in one place,
  - ensuring immediate availability without waiting time,
  - the option to take furniture home,
  - and finally let customers build them up on their own.

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How to Identify Problems Worth Solving

Examples

- Camera manufacturers
  - Not long ago the competitive advantages were gained on a pure functional level: the amount of megapixels, the number of available lenses, the number of focus points and so on.

  SONY

  - Sony discovered, that the problem worth solving of their clients is not to get the technically best camera, but become better photographers.

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How to Identify Problems Worth Solving

Examples

- Instead of just selling tools, some DIY shops have started to offer workshops, where people learn from experts how to become better home workers. These companies discovered, that **the problem worth solving** of their customers is not a lack in tools, but a lack in instruction and know how to become better do-it-yourselfers.

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How to Identify Problems Worth Solving

- The ***starting point*** for efficient and sustainable innovation is always the ***identification of a problem worth solving*** at a higher level than the mere functional one.

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How to Identify Problems Worth Solving

1. A Problem Worth Solving must be relevant

- Innovation projects often address just fictitious problems or inconveniences for customers. And often, only the *symptoms* of a deeper core problem are addressed, not the underlying problem itself.

- Truly relevant problems always appear where customers have no or only inadequate solutions at their fingertips when carrying out their tasks repeatedly or in a certain context, and where the level of frustration or suffering is high.

- The problem can either be widespread, concerning many customers or a niche problem for a small group of customers. The solution to this problem must have a significant impact on the customer's life and must provide significant benefits in comparison with existing solutions.

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How to Identify Problems Worth Solving

2. A Problem Worth Solving must be solvable

- Realistically, it must be possible to solve a problem with appropriate effort. Reducing the amount of carbon dioxide in our atmosphere back to the level 200 years ago, might stop climate change. But realistically seen, this is not possible with current technology and the amount of available energy.

- The following requirements must be met to solve a problem:
  - the appropriate entrepreneurial or personal performance of an organization or a team,
  - the necessary resources in the form of time, employees, technology, skills, etc.,
  - no political and regulatory restrictions such as laws or patent protection,
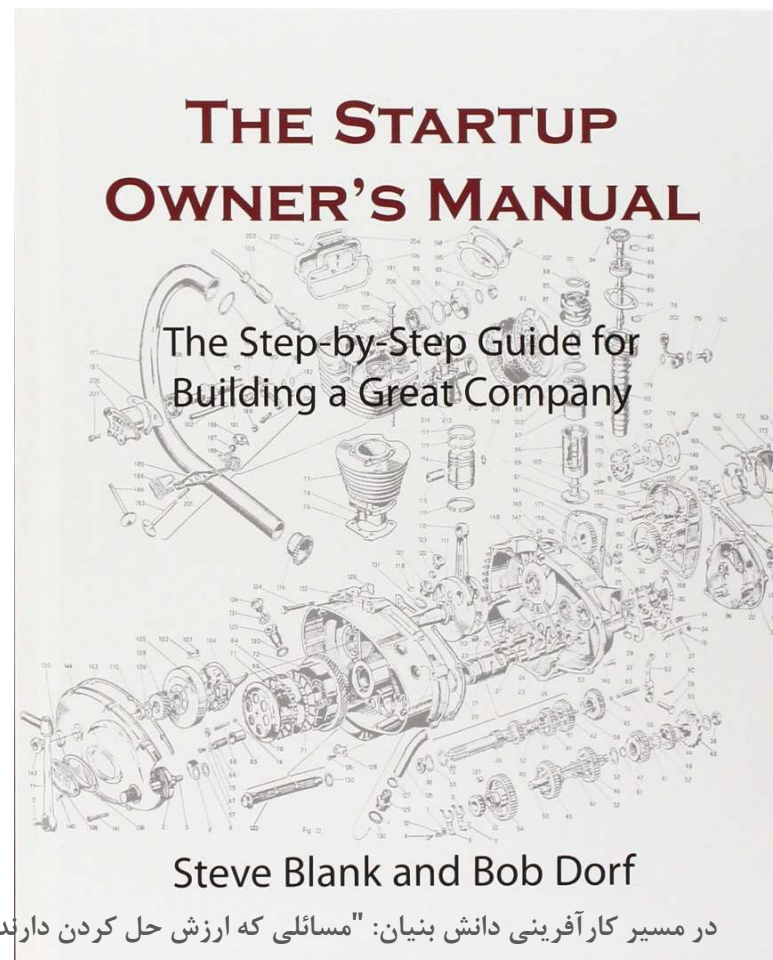 - available technology and
  - the social acceptance of a solution.

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How to Identify Problems Worth Solving

3. A Problem Worth Solving must be marketable

- Whether a solution is profitable for companies or not, depends on the amount of paying customers.

- For non-profit organizations, profitable can also mean that the solution pays in for the overall purpose of the organization.

- In any case, the profitability must be guaranteed, i.e. the solution effort must be proportionate to the revenue.

- But also factors such as the timing of the solution, the competitive situation and the choice of the right channels to communicate with customers are just as decisive.

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How to Identify Problems Worth Solving

- **How do you identify problems worth solving?**

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How to Identify Problems Worth Solving

1. Identify problems worth solving during conversations

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How to Identify Problems Worth Solving

1. Identify problems worth solving during conversations

- **The most promising approach is to identify the problems and challenges of a particular group of customers by talking to them very early in the innovation process.**

- **This phase, called exploration or discovery, serves to better understand the customer's problem and to gain empathy for their situation.**

- **There are different methods to do this, but all of them are confronted with a lack of clarity: People often say one thing and do another.**

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How to Identify Problems Worth Solving

1. Identify problems worth solving during conversations

- This *uncertainty relation* proves that people behave differently under observation than unobserved and often do not tell the truth in interviews. This is due to several reasons:
  - they are just not capable to articulate their thoughts or explain their behavior,
  - they don't want to appear rude,
  - they are expected to make a statement or are paid to do so with incentives,
  - they don't want to admit they don't have an answer, or
  - they simply don't care.

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How to Identify Problems Worth Solving

1. Identify problems worth solving during conversations

- For example, most people would probably agree that climate change is a pressing issue; yet they book long-distance air travel against their better judgment.

- *«Consumers can't articulate what they want. And even when they do, their actions may tell a different story.» (Clayton Christensen)*

- So even if you gather insights during conversations with your customers you will need to validate those insights by experiments on additional research techniques.

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How to Identify Problems Worth Solving

1. Identify problems worth solving during conversations

The Mom Test
How to talk to customers and learn if your business is a good idea when everybody is lying to you

Book by Rob Fitzpatrick

How to Identify Problems Worth Solving

2. Identify problems worth solving by observation

- Observation in one's own life or in the life of others
  - Where people or an organization are not able to purchase and use a product or service due to costs, non-existing channels, complexity...
  - Where existing products are used for purposes different from what they were made for. The current lack of alternatives requires a good solution.
  - Observing technical, economic and social developments
    - Example: When the EU's decided to introduce the General Data Protection Regulation, it was clear, that many companies would face the problem of adapting their websites accordingly.
    - A new market emerged for privacy consultants. Clever, who anticipated the upcoming problem early.

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How to Identify Problems Worth Solving

3. Identify problems worth solving by detecting deficient solutions

- A lot of potential lies in existing solutions, which address a problem inadequately.

- Example: Reduction in the traffic speed with speed bumps

- The Swedish company Edeva introduced a solution: *Actibump …*

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How to Identify Problems Worth Solving

4. Create problems worth solving intentionally

- This approach creates an artificial problem and offers the perfect solution right away.

- Examples:
  - Until a few years ago, people did not know that they needed to record daily heart rate, daily activities, burned calories and sleep. However, thanks to the efforts of health watch manufacturers, this need has been 'awakened' in them, and health watches and fitness trackers are now sold in large quantities.

- These artificially created problems mainly create needs on an emotional or social level, which can be much stronger than needs on a purely functional level.

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How to Identify Problems Worth Solving

Summary

- Working on the right thing a.k.a. a problem worth solving is the foundation of successful innovations and startups. Combined with conscientiously applied innovation and design thinking processes it will increase the chance significantly, to create solutions and products people are willing to pay for.

- A problem worth solving alone is certainly no guarantee for a successful innovation project or business model. Too many other factors, such as the timing of a solution or the composition of the team, also play a large role. However, **without** a problem worth solving, failure is almost guaranteed.

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How to find your startup problem worth solving, by Wicky Brock

1. Is this "really" a problem worth solving? Is there any nagging, unsolved pain?

2. Who else cares?

3. Does anyone care enough to commit cash if you can only make the problem 20% less bad?

4. Do you and the people you can readily access have the skills or sector knowledge to think about how you'd solve the problem?

5. What would be better about the world if you could create even the tiniest solution?

6. Do you and your team care enough about the problem

How to find your startup problem worth solving, by Wicky Brock

1. A problem worth solving?
2. Who else cares?
3. Who'd commit for a modest improvement?
4. Do we have the skills to know where to start?
5. What does solved look and feel like?
6. Is the love there?

در مسیر کارآفرینی دانش بنیان: "مسائلی که ارزش حل کردن دارند"

سرفصل مطالب

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- *هفت سوالی که باید پاسخشان را بدانیم*
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Zero to One

1. The Engineering Question

- *Can you create breakthrough technology instead of incremental improvements?*

Zero to One

2. The Timing Question

- *Is now the right time to start your particular business?*

ZERO TO ONE

NOTES ON STARTUPS, OR
HOW TO BUILD THE FUTURE

Peter Thiel
with BLAKE MASTERS

Zero to One

3. The Monopoly Question

- *Are you starting with a big share of a small market?*

Zero to One

4. The People Question

• *Do you have the right team?*

Zero to One

5. The Distribution Question

- *Do you have a way to not just create but deliver your product?*

Zero to One

6. The Durability Question

- *Will your market position be defensible 10 and 20 years into the future?*

Zero to One

7. The Secret Question
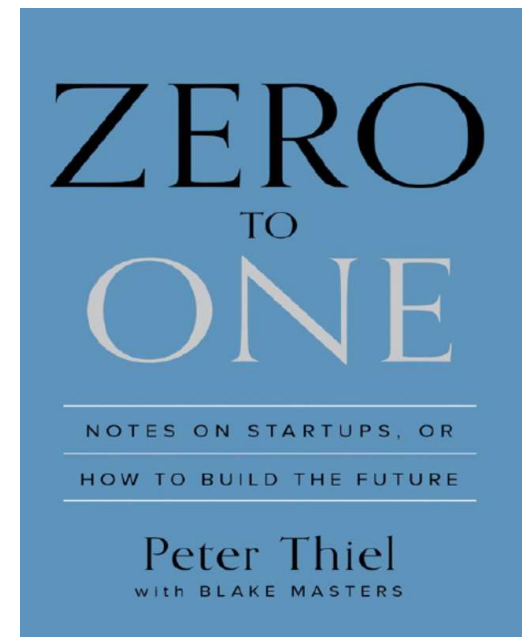
- *Have you identified a unique opportunity that others don't see?*

Zero to One

1. The Engineering Question
2. The Timing Question
3. The Monopoly Question
4. The People Question
5. The Distribution Question
6. The Durability Question
7. The Secret Question
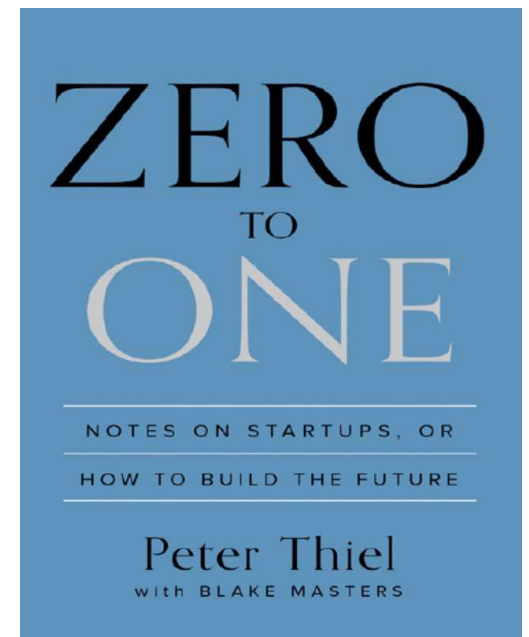
ZERO TO ONE

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BSMF PRESENTATION TEMPLATE

Blue Sparrows MedTech Fund

Experience to accelerate

1. PROBLEM

- - What is the problem that is being addressed by the solution?
- - Who is experiencing this problem?
- - What is the 'pain' of this problem?

2. TECHNOLOGY SOLUTION

Blue Sparrows MedTech Fund
Experience to accelerate

- - What is the innovation?
- - What is your unique value proposition?
- - How have you proven/will you prove it works?

3. CLINICAL NEED

- - What is the unmet clinical need?
- - What is the existing standard of care?

4. MARKET OPPORTUNITY

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- How big is the existing market?

- What segment of the market will you target, or seek to create?

- What data will lead to customer adoption?

5. BUSINESS MODEL

- - What is your revenue model? Who pays?

- - What is your cost structure?

- - How do you obtain new customers and what compels them to adopt/pay?

- - If reimbursement is sought, are there existing codes in place?

6. COMPETITION & COMPETITIVE ADVANTAGES

- - Who are the existing competitors?

- - What emerging competitors will be relevant once you're on the market?

- - What are your competitive advantages?

7. INTELLECTUAL PROPERTY

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- - Do patentable claims provide a competitive advantage?
- - Do patentable claims provide you the Freedom to Operate?
- - Do you envision other means to protect your intellectual property?

8. REGULATORY

- - What is the classification of your product for CE and/or FDA?

- - What clinical study is likely required to obtain CE mark and FDA approval?

- - What are other relevant regulatory constraints (e.g. data privacy, software)?

9. MANAGEMENT & TEAM

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- - What skill sets and experience are required for this company?
- - Is the team in place qualified to accomplish near term objectives?

10. PARTNERS & EXIT STRATEGY

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- - What corporations would want to partner with or acquire your company?

- - What milestones must you hit before then?

- - What comparable company exits can provide investors with a reasonable exit expectation?

11. INVESTMENT PROFILE

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- - Who are the existing shareholders? How much did they invest?

- - How much capital is needed to reach a value creating milestone on which you can fundraise next (or reach break-even)?

- - What support is needed to reach a value creating milestone on which you can fundraise next (or reach break-even)?

12. FINANCIAL PLANNING

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- - What expenses are projected for the upcoming years?
- - What profits are projected for the upcoming years?

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بیاندیشیم

- چقدر به «مسائلی که ارزش حل کردن دارند» می اندیشیم؟

بیاندیشیم

- چگونه در میان مسائلی که ارزش حل کردن دارند، اولویت بندی کنیم؟

مثالی از اولویت بندی مساله ها

جمع نمره	معیار چهارم 35%	معیار سوم 30%	معیار دوم 15%	معیار اول 20%	وزن هر معیار
۷.۳	A	B	A	D	مساله ی شماره ی ۱
۶.۵۵	C	A	D	A	مساله ی شماره ی ۲
۶.۴	D	A	B	A	مساله ی شماره ی ۳

بیاندیشیم

- آیا مسائلی که ارزش حل کردن دارند، به مسائلی محدود می شوند که «درآمد قابل قبولی» ایجاد کنند؟

أميرُ المُؤمنينَ عَلى الَّيَّيَّيَّا: عَليكَ بِالآخِرَة تَأتِك الدُّنيا صاغِرَةً

تو مراقب آخرتت باش ، دنیا خودش ذلیلانه پیش تو می‌آید

غررالحکم ح ۲۶۰۳ ص ۱۴۴

70