

Innovation, Technology and Business-Project Incubation in the Barcelona Medical Association

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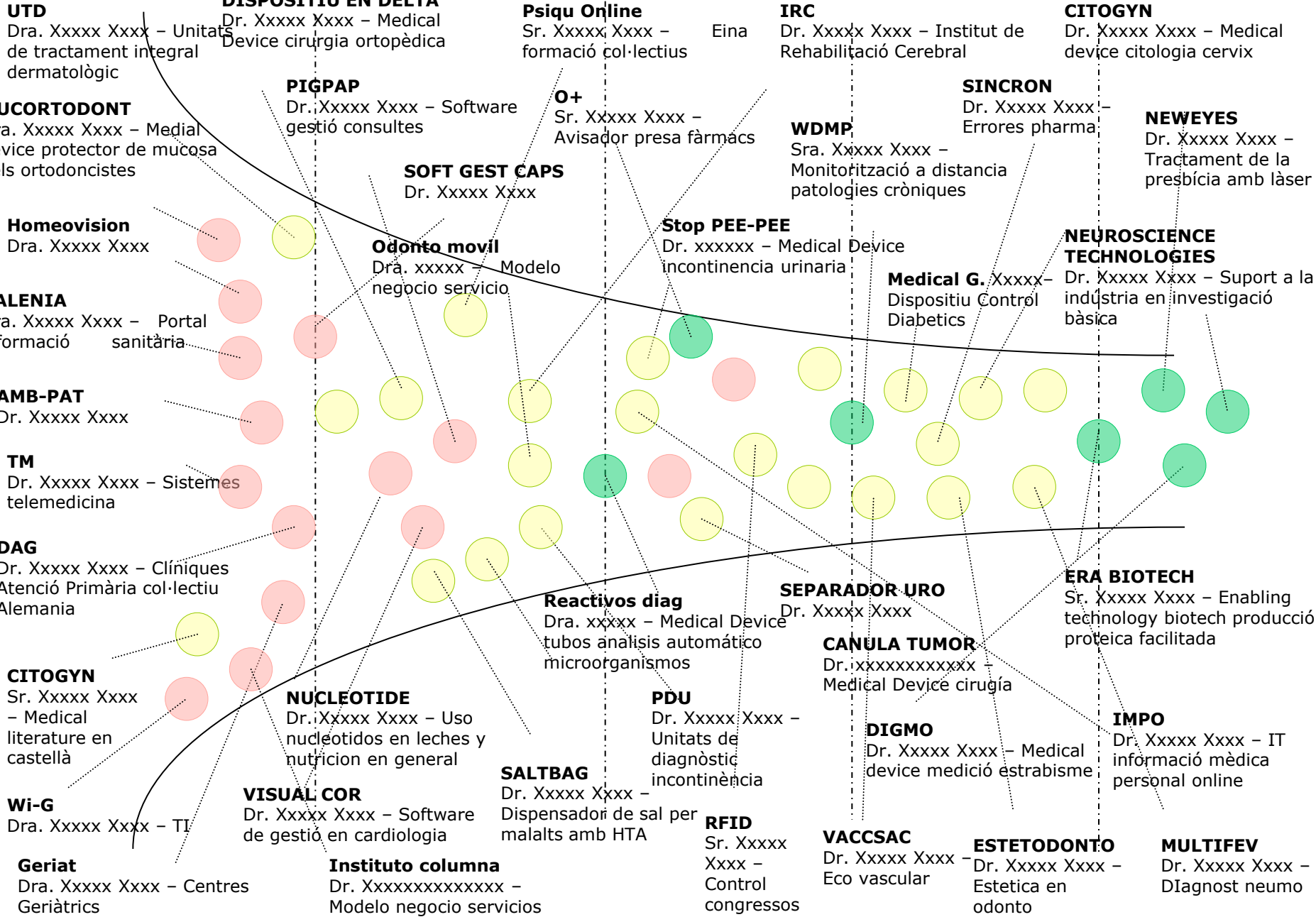
IDEA

OPORTUNITY

BP FINAL

VC

€



Economics
of IT

+

The
process

+

Framework

=

Opportunities

The economics of healthcare IT

Marginal cost

Marginal cost is the change in total cost that arises when the quantity produced changes by one unit

It is a general principle of economics that a (rational) producer should always produce (and sell) the last unit if the marginal cost is less than the market price (market price will be dictated by supply and demand).



Basic economics tells us that in a competitive market, price falls to the marginal cost. Healthcare has the potential to become a very competitive market in the XXIst century. After all, we all need it, demand is huge.

What is so special about most e-Health initiatives?
Marginal cost is close to zero.

The law of increasing returns

- In eHealth, expensive resources (fixed costs) can serve tens of thousands of users (marginal costs).
- Healthcare, when looked from the point of view of entrepreneurs, is all about scale, finding ways to attract the most users for centralized resources, spreading those costs over larger and larger demand as the technology gets more and more capable.

Paradox: Law of increasing returns
(economies of scale, metcalfe law,
externalities)

The process

#0

**How much is
an idea worth?**

#1

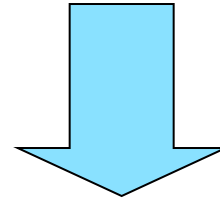
**Where do ideas
come from?**

Sector: IT



The problem:

Chronic conditions require multiple visits (most of them unnecessary) making patients lives very uncomfortable.



Wireless disease management

Several initiatives are offering a very convenient medical control of chronic diseases such as diabetes, hypertension, asthma, etc., allowing patients to reduce significantly the number of visits to their GPs. Control is provided through bluetooth devices that monitor different conditions and transmit medical data through regular mobile phones.

#2

It is important to know the healthcare sector


- Healthcare value chain is the instrument to know all stakeholders
- It is essential as well to know the 4 areas of healthcare innovation, they usually interact.


Healthcare value chain

Who is who in healthcare

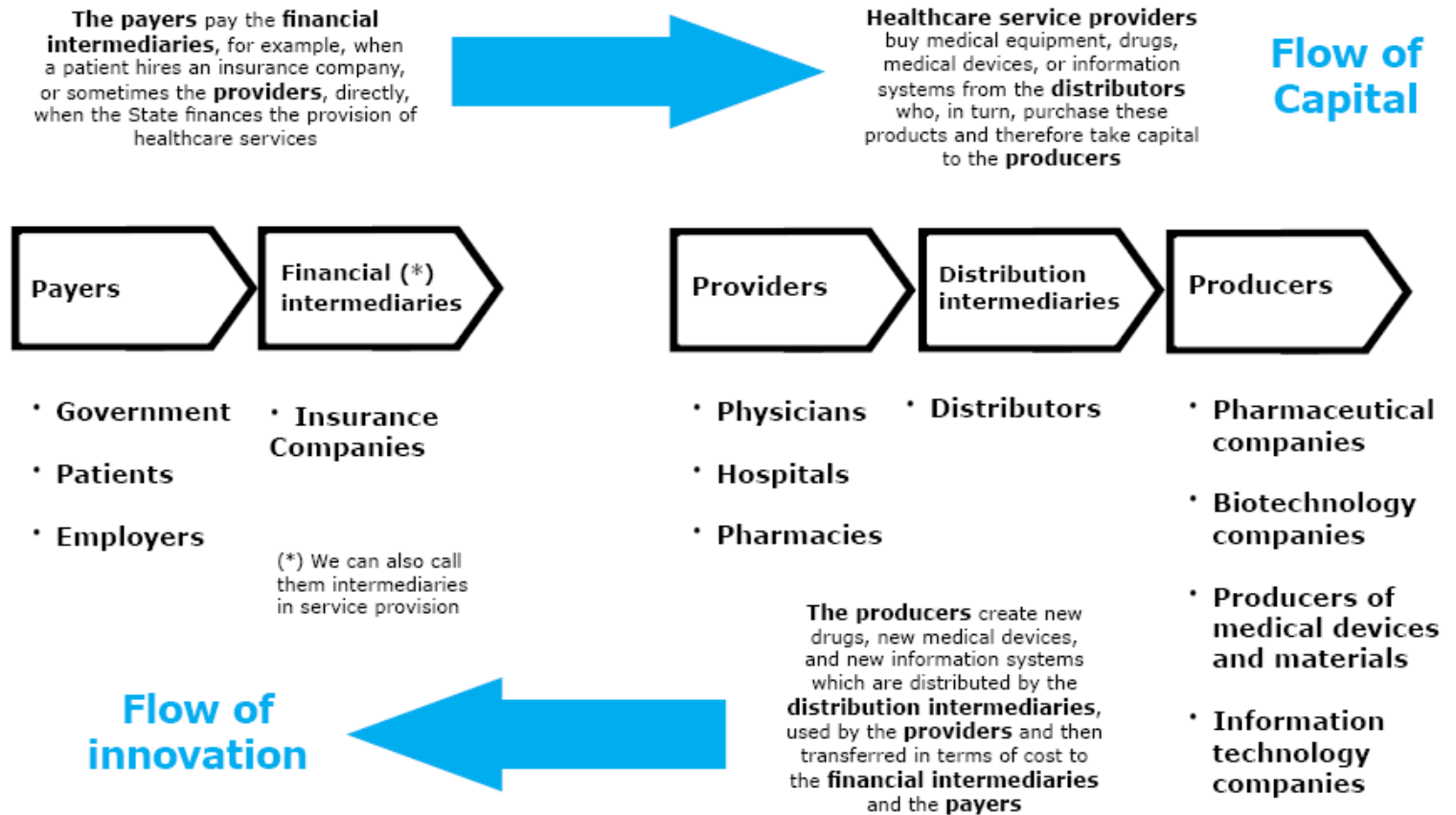
The chain has five protagonists (three main actors and two intermediaries), and can be depicted in the following way:

Innovation arises from the sectors on the right side of the value chain, with the exception of the "services" sector that completely, encompasses the entire chain and which therefore demonstrates that in reality, innovation is possible at all levels

 **Vertical integration:**
the union of actors from different links on the chain.

 **Horizontal integration:**
the union of actors from the same link on the chain.

X Disintermediation:
Bypassing one of the actors from a link on the chain.



Healthcare value chain

Who is who in healthcare

New business models are coming to the marketplace, distorting and re-inventing the value chain

Many start-ups are disrupting in one way or another the traditional healthcare value chain. There are (at least) three new connections that are re-inventing how the healthcare is provided to citizens (see red arrows in the diagram). In essence, what is happening is that the three actors are interacting more and more between them in many different ways.

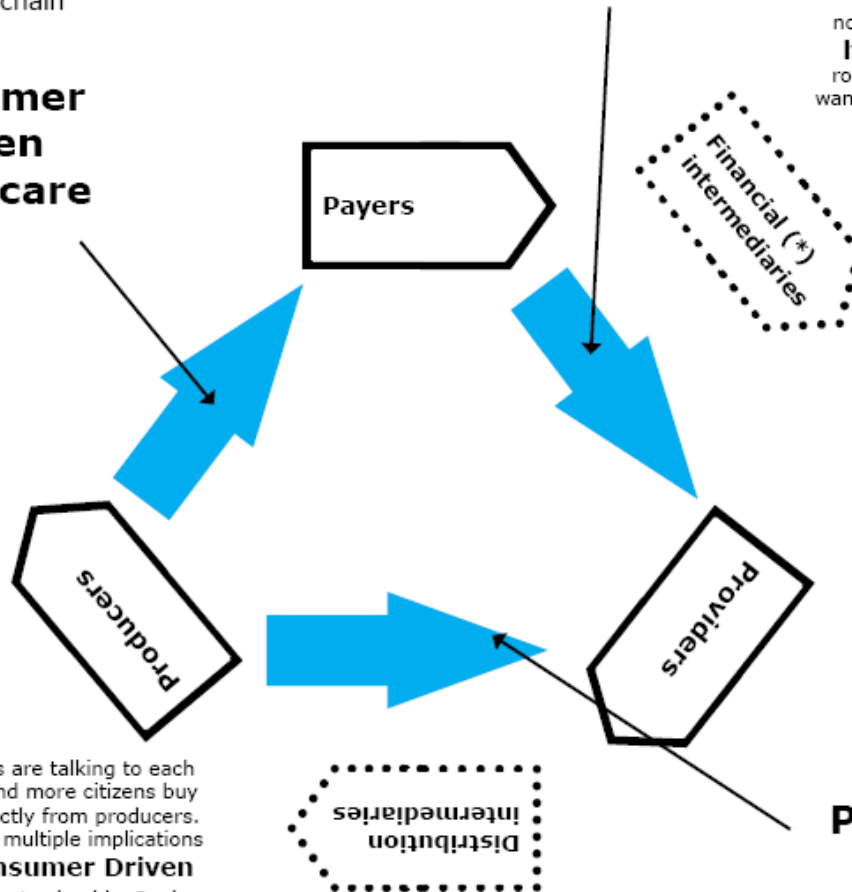
Payers and producers are talking to each other as well. More and more citizens buy healthcare goods directly from producers. This is just one of the multiple implications of the advent of **Consumer Driven Healthcare** (concept coined by Regina Herzlinger): a healthcare system where citizens take an active role in managing their health and are ready to pay for it.

Consumer driven healthcare

Retail healthcare

Payers have traditionally disintermediated financiers by requesting and paying services directly from MDs (i.e. in private practice). And now, a new model emerges: **retail healthcare**. When it comes to routine healthcare, many consumers want more convenient, faster, and more affordable care.

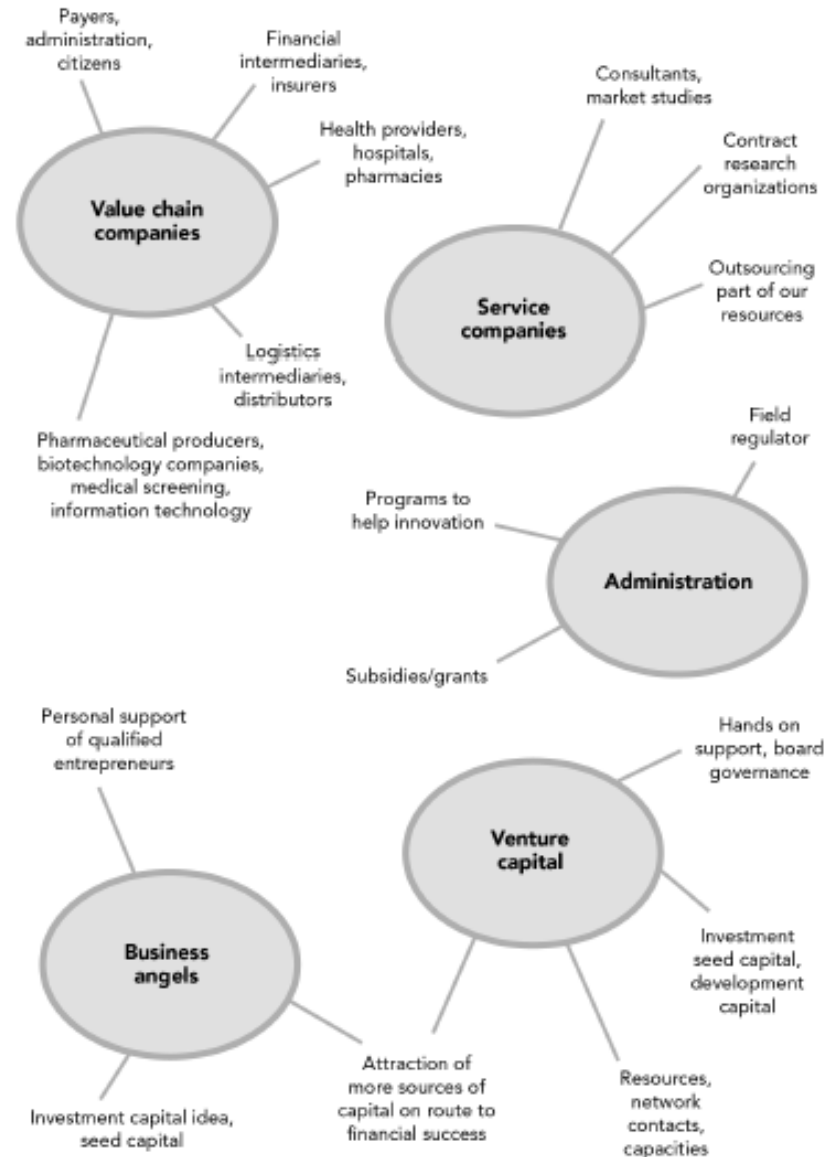
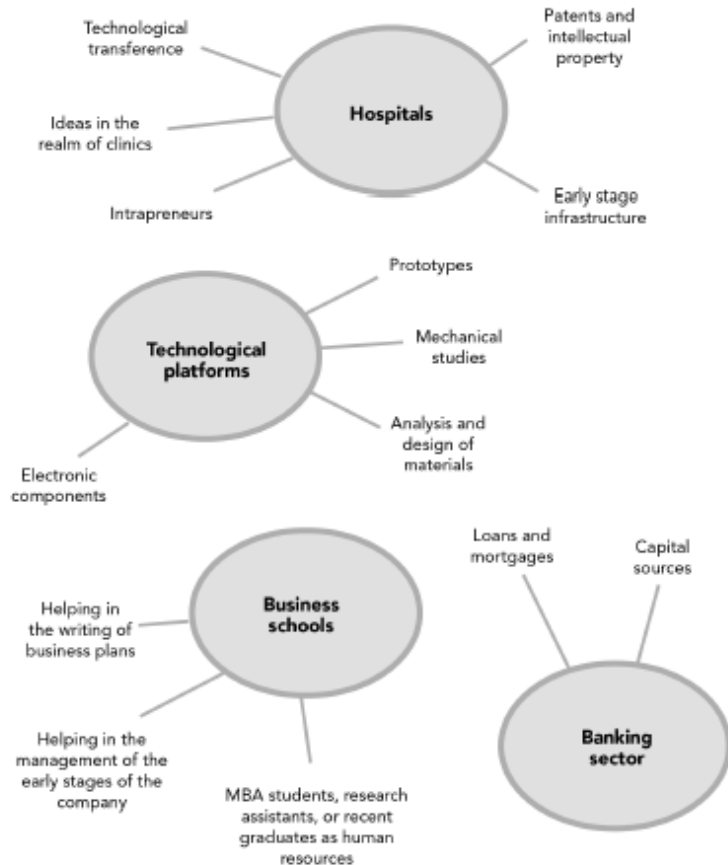
Personalized medicine means distributing "one tailored product" to "one patient" at a time, and therefore it is a model where traditional distributors tend to be disintermediated. Producers interact with providers in a one-on-one relationship (i.e. the doctors send the requirements to the producer and the producer sends the "personalized" goods straight to the hospital).



Personalized medicine

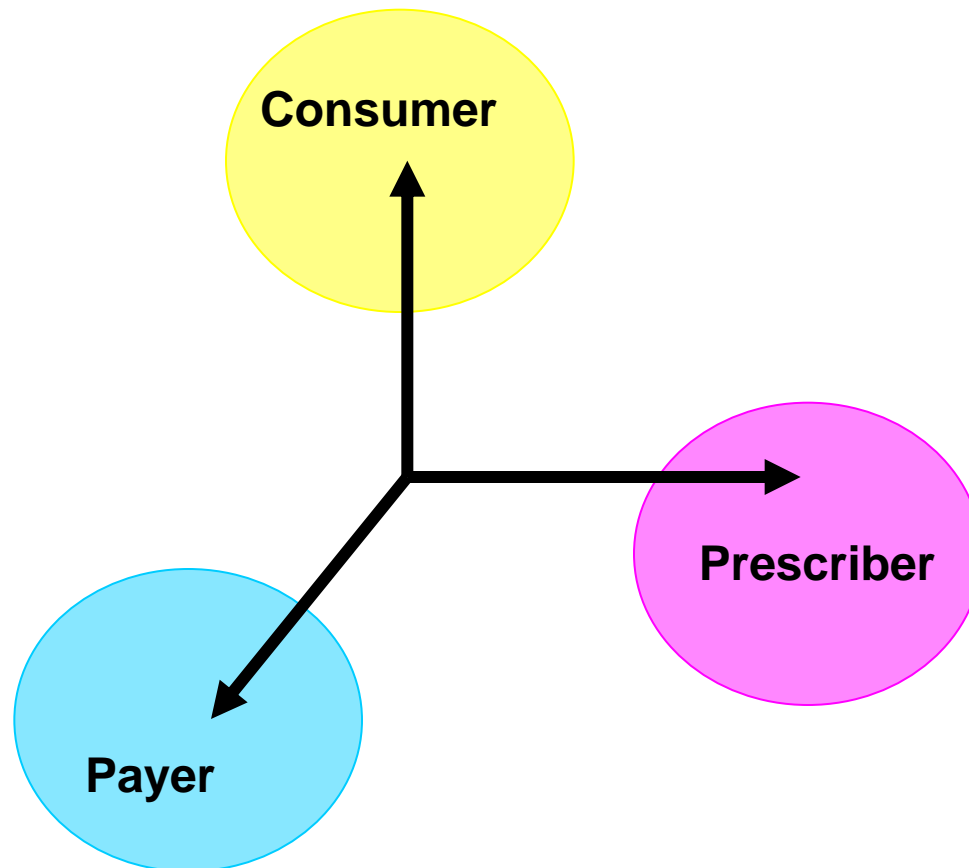
Entrepreneurial Ecosystem The Different Players in the Healthcare Sector

We can see here all the companies, institutions, organizations, and capital sources that carry out a specific role in the innovation



Consumer, prescriber and payer

Three different stakeholders, each one of them worried by different issues



A heavily regulated marketplace

In the last years, healthcare has witnessed the emergence of an increasing regulatory environment throughout the world. This environment has an impact on how products and services are tested on patients, and how they get approved.

Supply and demand

- If a product is more expensive, its demand falls (?)
- Weird effect on healthcare

The Care-Delivery Value Chain

Who is who in a hospital

Primary and support activities in the care environment, adapted from Porter (9). Value chain in providing services in a neuro-oncological surgery unit.

Support Activities

(that help primary activities by maintaining the right activity environment)

Knowledge Management

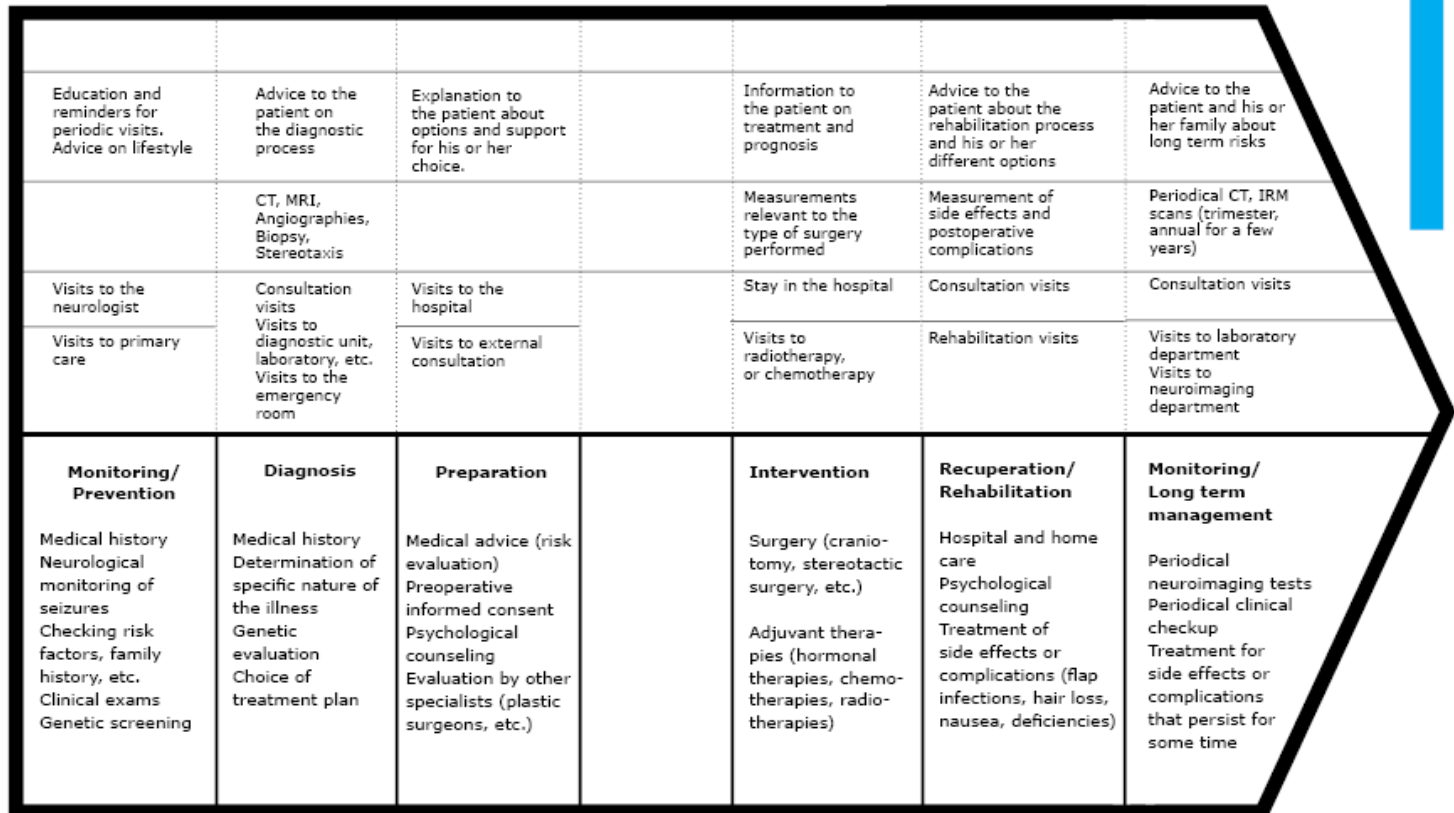
Patient Information

Result Measurement

Patient Admission/Entry

Primary Activities

(directly related to providing healthcare)



#3

Imagine the story of a healthcare idea

What? How? Who?

Creation of a Start-Up The History of an Idea

The process of a start-up is highly creative and therefore a little bit chaotic. Nevertheless, a careful reflection about this process discovers a series of stages that are difficult to avoid. The healthcare professional with the hope of innovating or a start-up in the sector should, in one way or another, go through each stage. I won't try to provide structure to a process that usually moves forward in bursts of creativity, but I believe it is useful to analyze each of these stages in a systematic way, just as if they were a highway map, in order to plan the process correctly. Each of these stages deals with a major detail to move it forward, in a way that the reader can find here as a series of basic principles that relate to the "history of an idea."

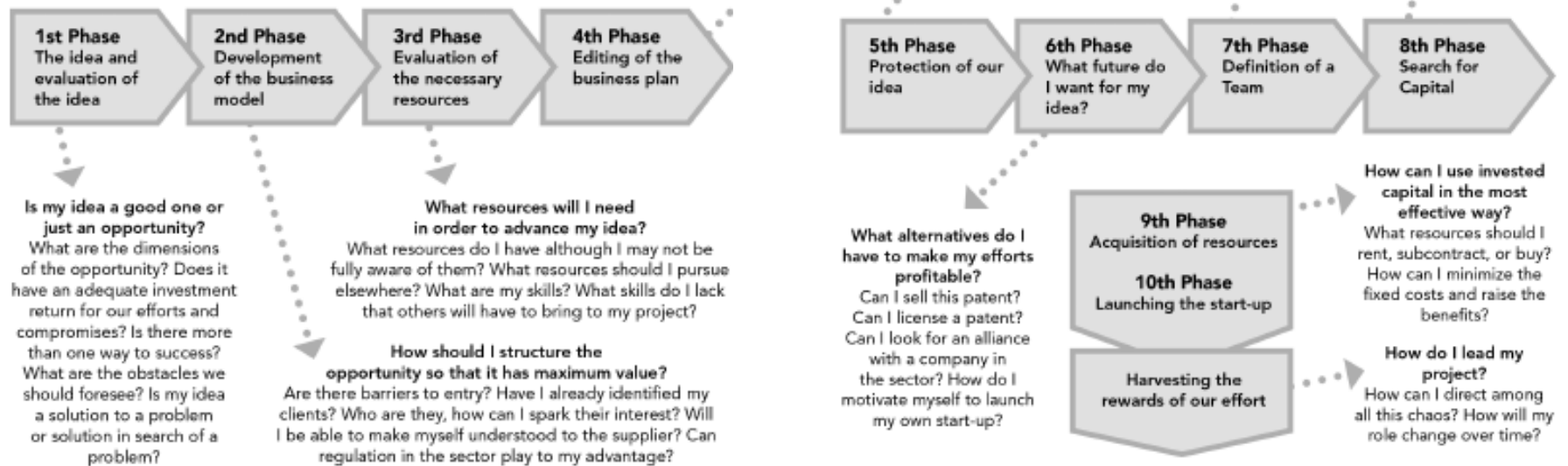


FIGURE 1.

Invention Labs

Bringing top minds together from diverse scientific, technology and biotechnology backgrounds to brainstorm and explore invention ideas 5-10 years in the future.



Invention Research & Development

Fine-tuning ideas, determining their feasibility, writing high-quality patents and improving the quality of patents received from outside inventors.



Invention Library™

Building a virtual library or clearinghouse of all of our inventions. Analyzing, aggregating and packaging inventions together to increase the value of the overall collection.



Market Enablement

Analyzing industry trends and identifying market opportunities for the use of our inventions across a variety of outputs from licensing to outright sale.



#4

Is it an opportunity?

Good idea \neq Opportunity

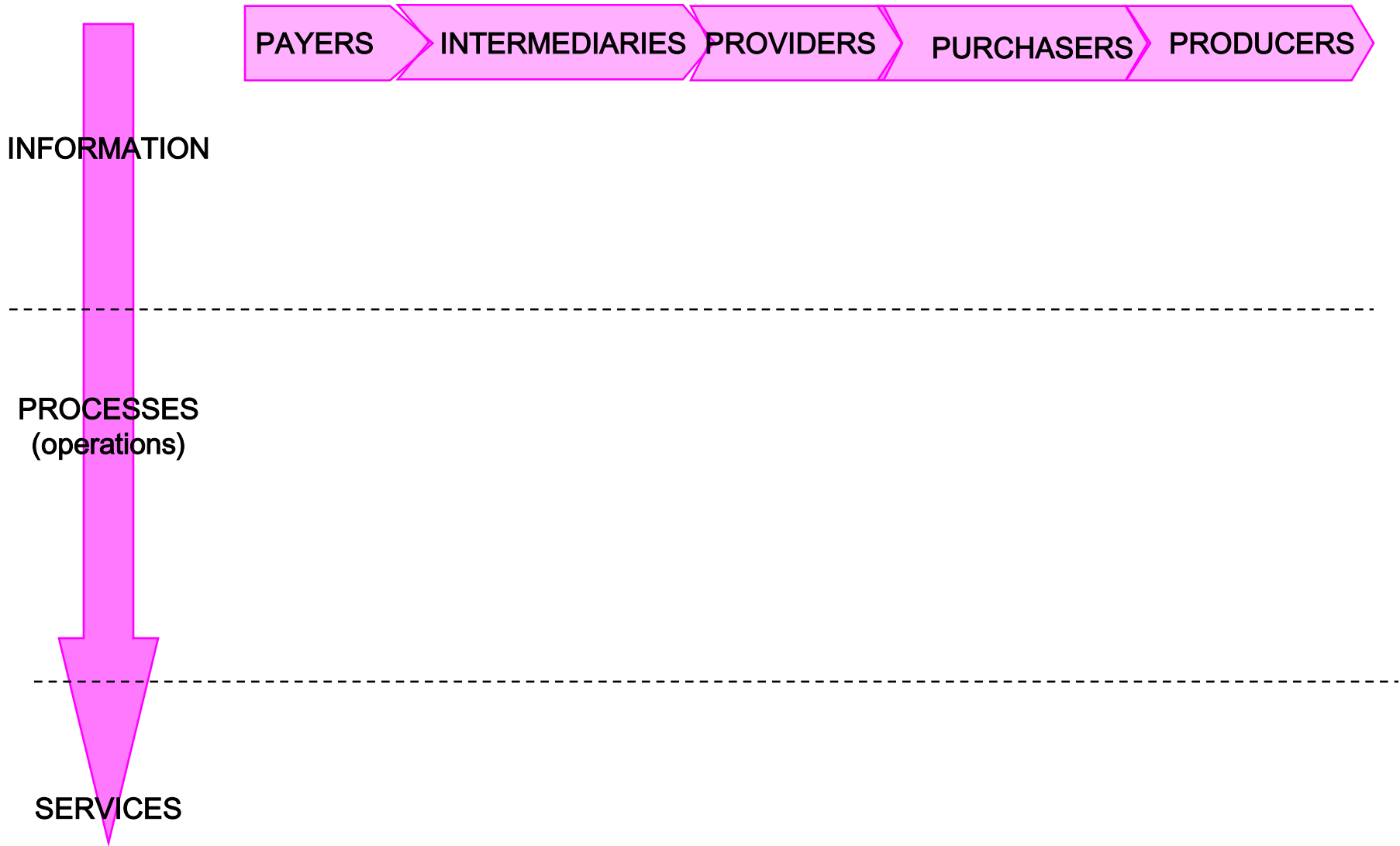
We need to learn to recognise an opportunity from a good idea.

Value framework

The perfect initiative

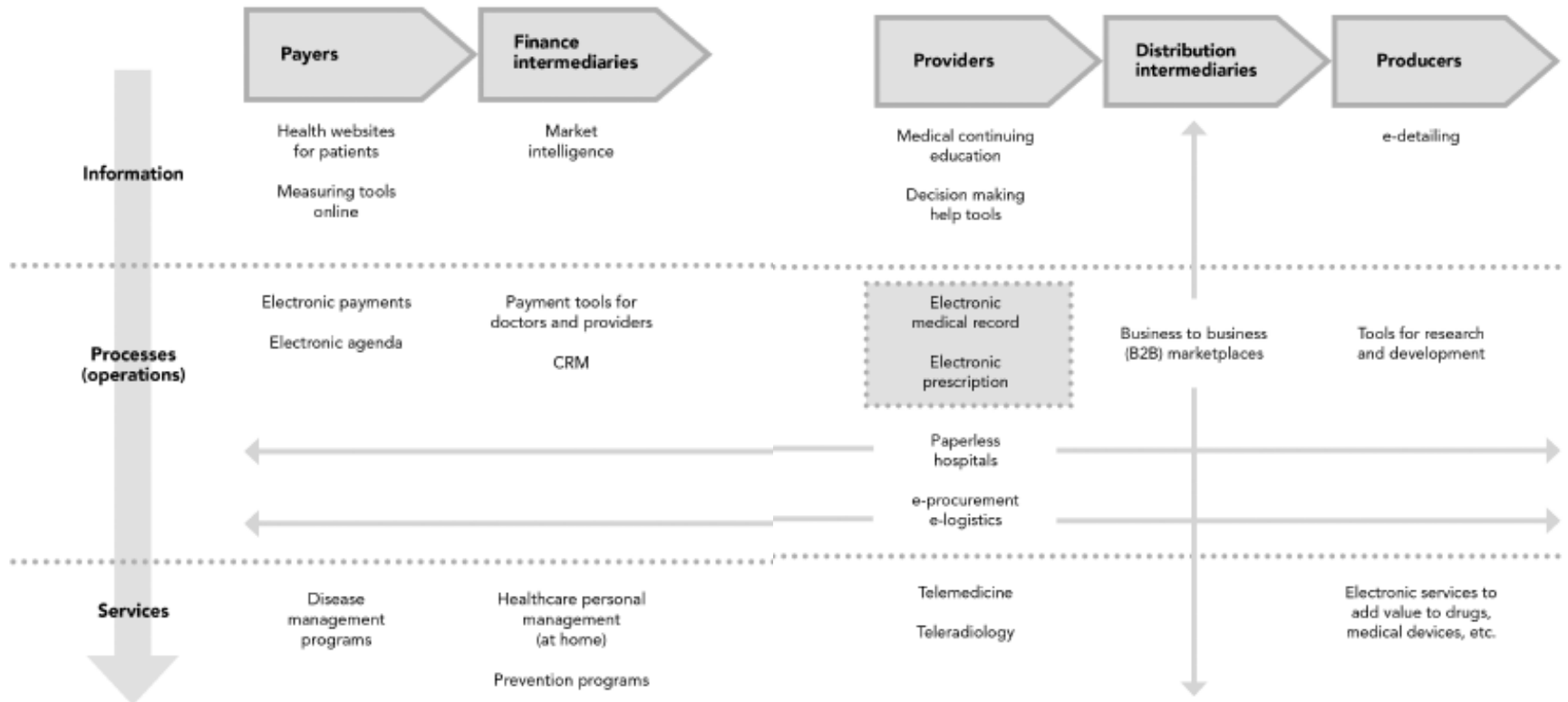


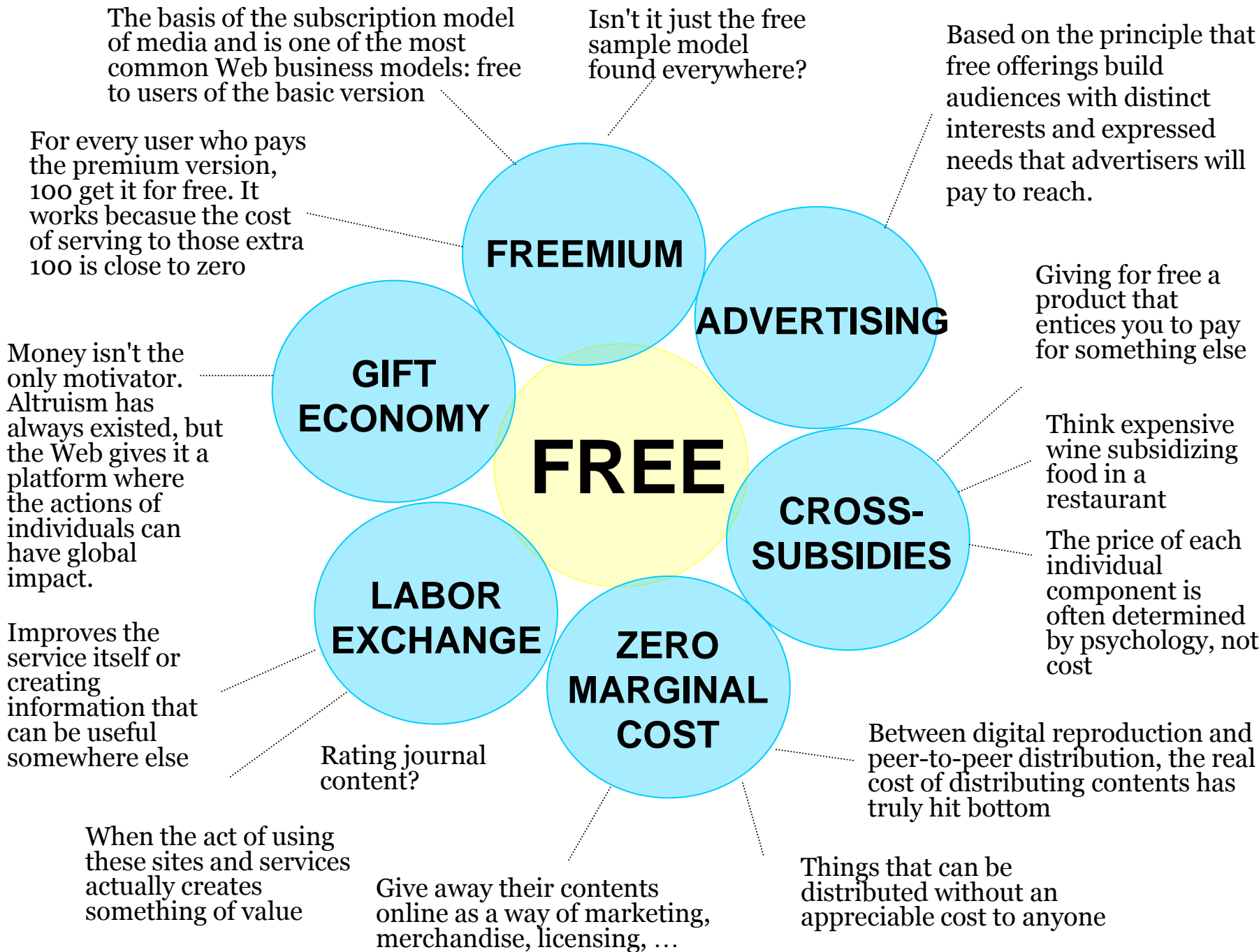
The healthcare value chain vs. the complexity of organizational change (some examples)



Analysis framework of initiatives in the IT sector

Healthcare IT start-ups can be classified according to their activities in relation to the value chain and its level of complexity





Don't

#1 My idea is enough

#2 I will be in charge forever

#3 Dilution is bad

#4 Quality = success

#5 Everybody loves me

#6 I will be all things to all people

#7 It is not the right time to launch

#8 Let's keep it secret

#9 I will crush VCs

#10 If I build it, they will come

Thank you