

INNOVATION STRATEGIES

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January 23rd, 29th and 30th, 2021

ACCREDITATIONS



MEMBERSHIPS



RANKINGS



Innovation strategies

The game

The game on top of the game

Generation of ideas

Selection of ideas

Intellectual property

Communication

Prototyping

Financing

Product development & management

Marketing & sales

Support

asc@fct.unl.pt; 913509370

Slides & reading lists at PBS portal

Working group on Facebook “Estratégias de inovação” at
<https://www.facebook.com/groups/233178778296323>

Available Monday thru Friday 6pm-7pm January 25th-February 11h at my Zoom
room <https://us02web.zoom.us/j/5362353244>

Explora group and Sunday News at
<https://www.facebook.com/groups/183536175571026/>

Evaluation

An introductory email to investors/clients to pitch your idea (1 page; individual work)

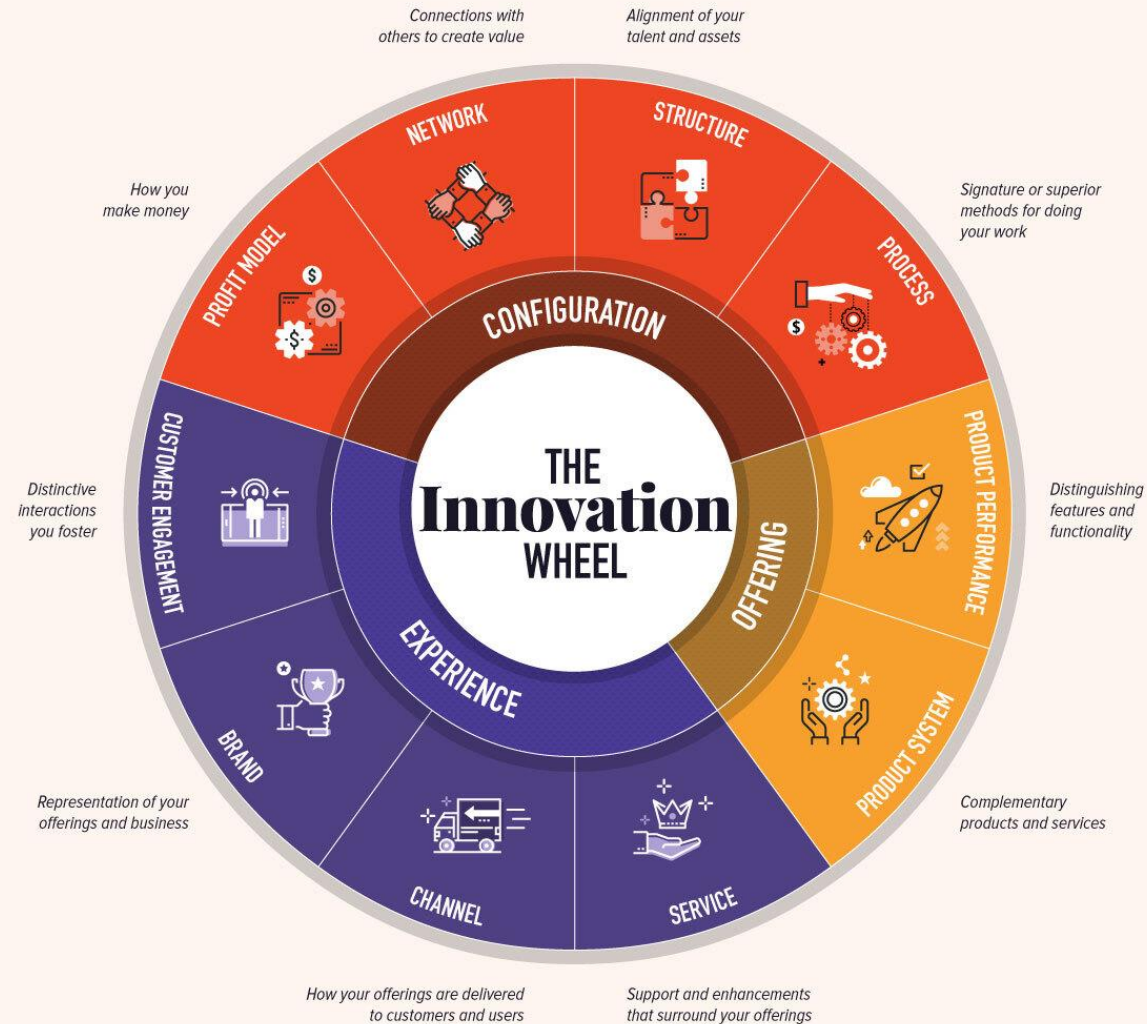
A first pitch on an idea for a product/service (10 slides; group work- 2/3 people)

Both due on February 11th

UNDERSTANDING THE 10 Types of Innovation

New products are invented from scratch all the time, but this is merely one way to innovate.

According to innovation firm **Doblin**, most big breakthroughs in history comprise some combination of the following 10 types of innovation.





High Flying Bird, Netflix

“We blacks dominate basketball.
Then the whites developed a game
on top of our game called NBA”



The game



Linear model

**Academia, innovation & industry –
traditional model
(Francis Bacon; 1561 – 1626)**



LINEAR TECHNOLOGY EVOLUTION

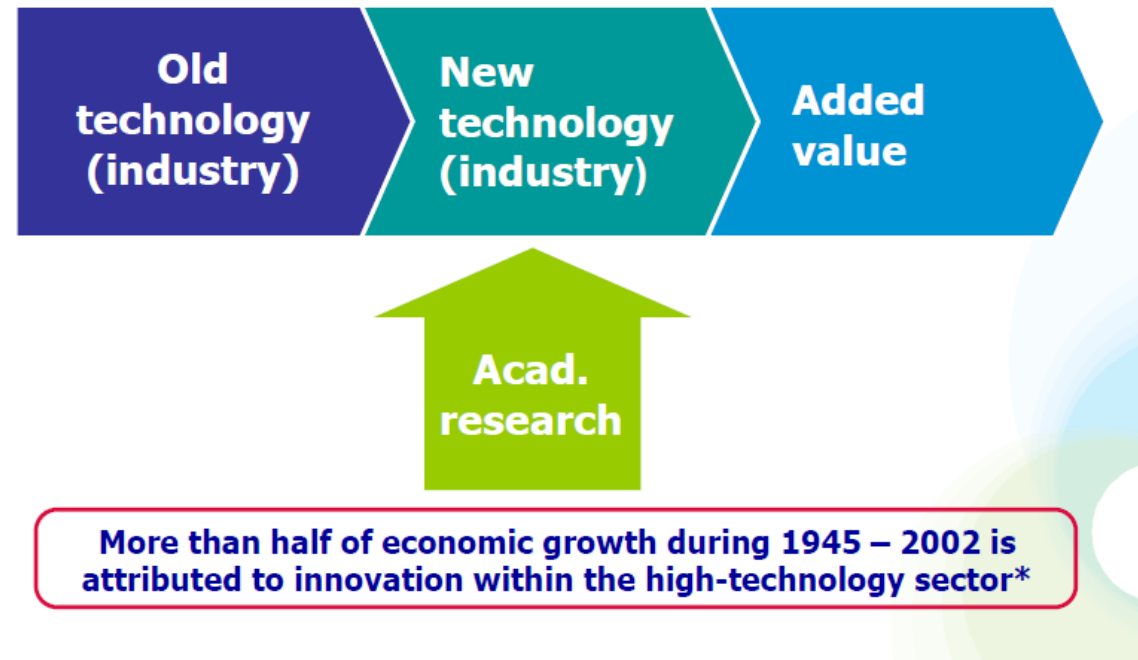


Californian model

Academia, innovation & industry: the Californian model (Adam Smith; 1723 – 1790)



BRANCHED TECHNOLOGY EVOLUTION MODEL



* Leary et al
2002



Deductive

- Reasoning from general principles to particular examples
- If $5+4=9$ AND $6+3=9$ THEN $5+4=6+3$

Inductive

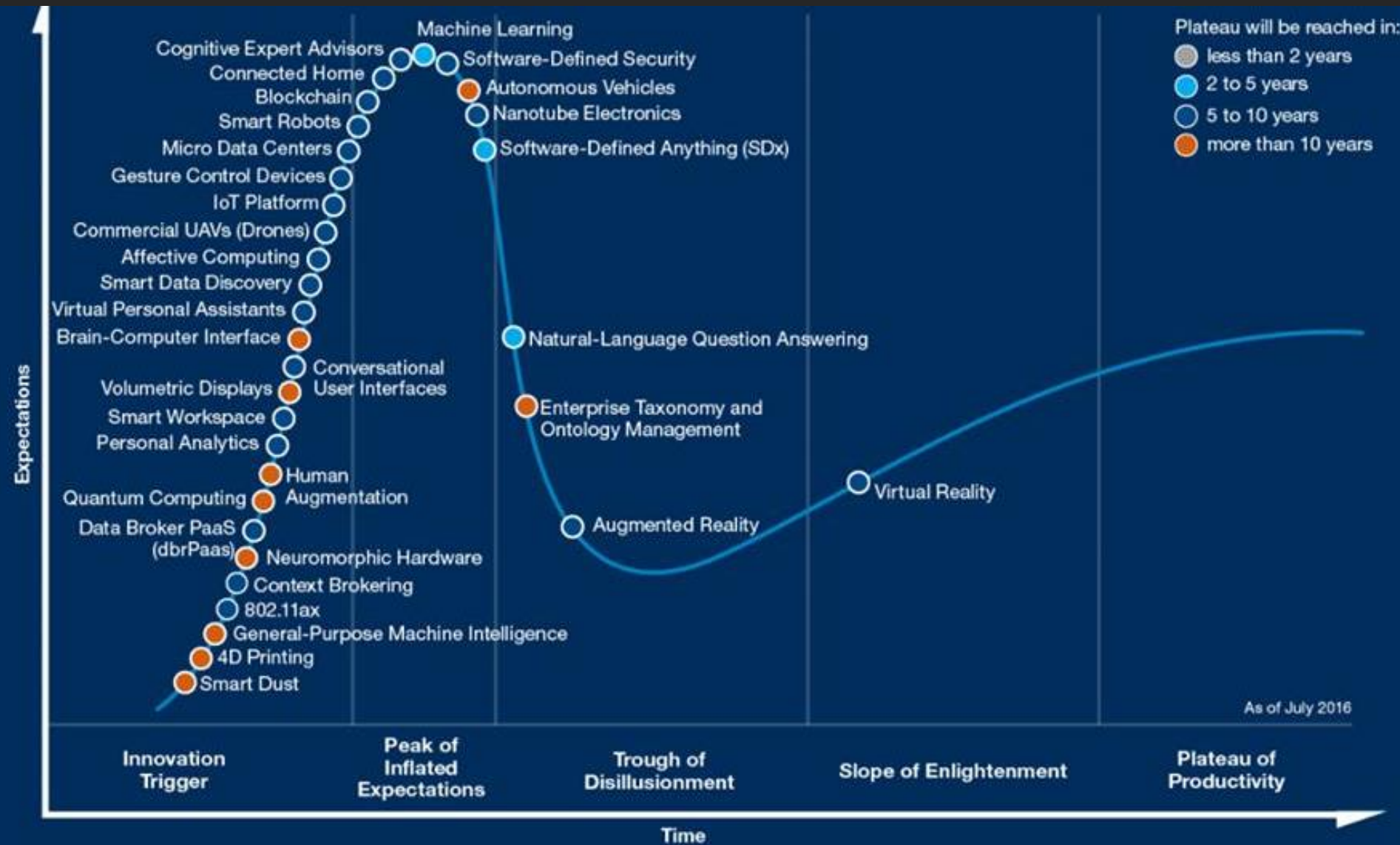
- Observing patterns and using those to make generalizations
- See tire tracks in snow; a car was here

Abductive

- Reasoning based on what might be
- Blueprint for a future state
- Critical to creative process

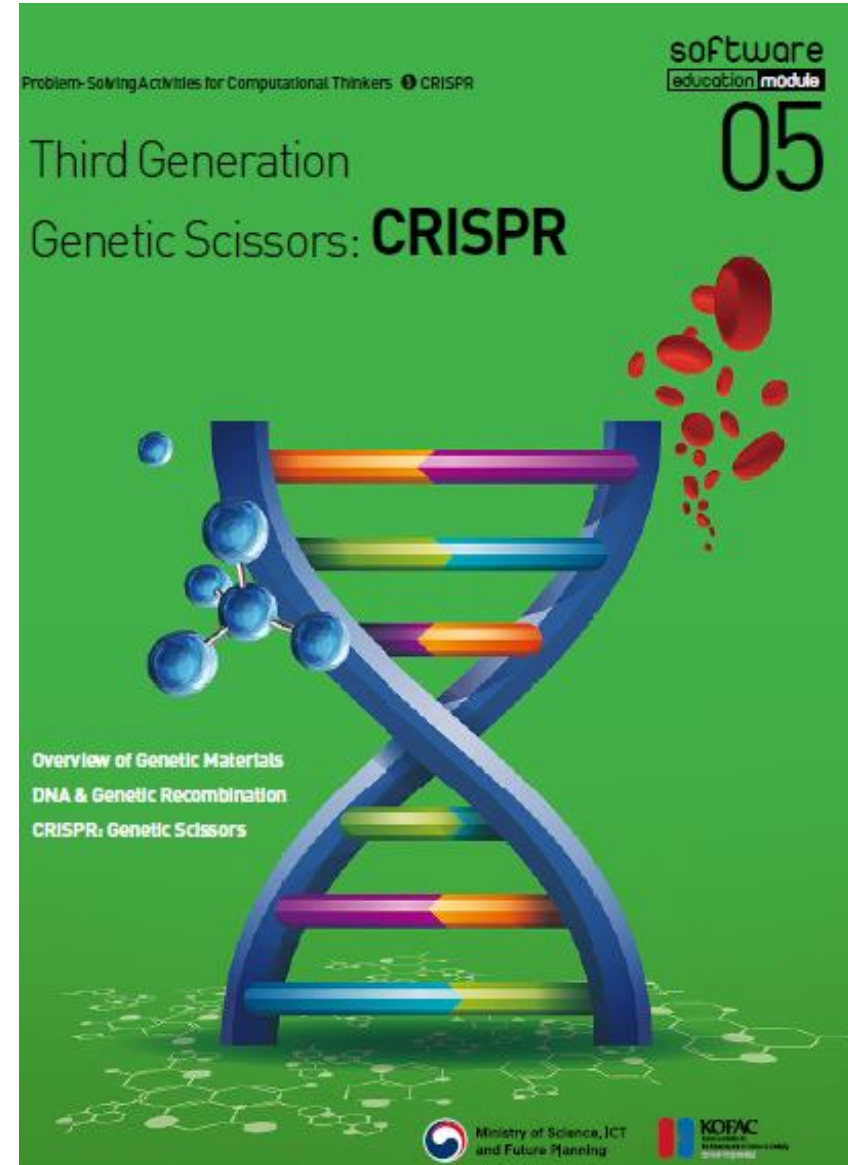
ML	IQ	DE	NE	CA	CN	BA	BG	EW	Bs
QI	B5	Qs	As	Bi	RM	No	ZP	Cc	Ac
DI	EA	Pc	AA	Cs	Sb	DD	Nz	OM	4D
		RE	PM	MB	IM	BR	OW	HT	Mc
			Hc	VI	CR	AL	Tc	Hb	

[Future Tech Periodic Table](#)



Learning from KOFAC (South Korea) program for 9th year students

- 1 [Artificial Intelligence](#)
- 2 [Driverless vehicles](#)
- 3 [Internet of things](#)
- 4 [Virtual reality](#)
- 5 [CRISPR](#)
- 6 [Space launch vehicles](#)
- 7 [Natural disasters](#)
- 8 [Smart medicine](#)
- 9 [Game engines](#)
- 10 [Sports statistics](#)



My game



The Real World

ADDING AND "TAGGING" INTELLIGENCE IN OBJECTS



● Augmented reality

By image recognition:
"It is a bottle"

By reading the bar code:
the cost is 50c

By using a QR CODE:
extended descriptions, images,
videos

● Sensorization

RFID: may provide detailed product information including the possibility of positioning

Additional sensors: may provide quality related information such as Ph and temperature

● Robotics

Sensors/actuators/processors
— A bottle may have a robotic exo-skeleton



The Real World



Mirrorworld



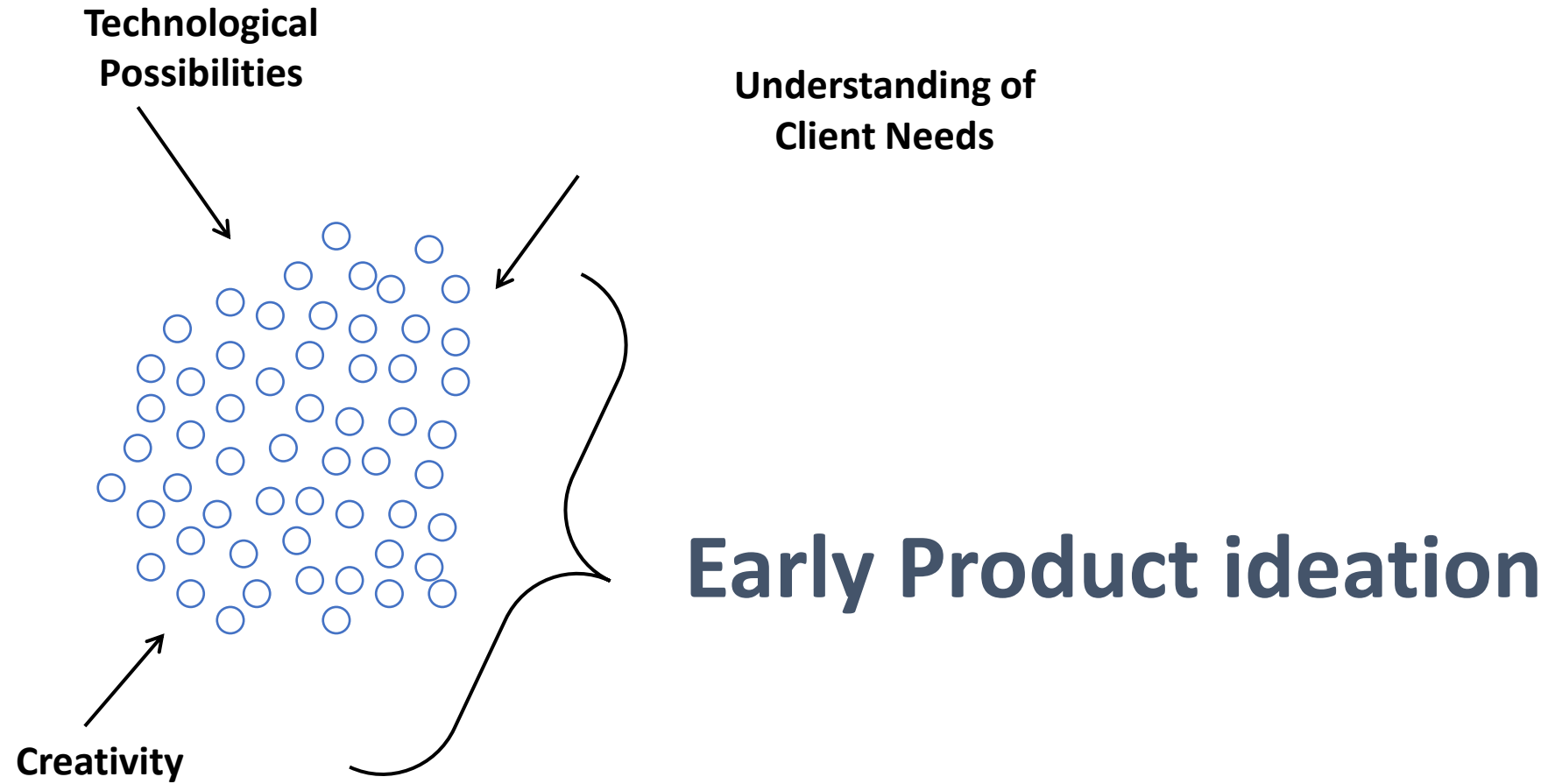
Bridging the Real and Data Worlds

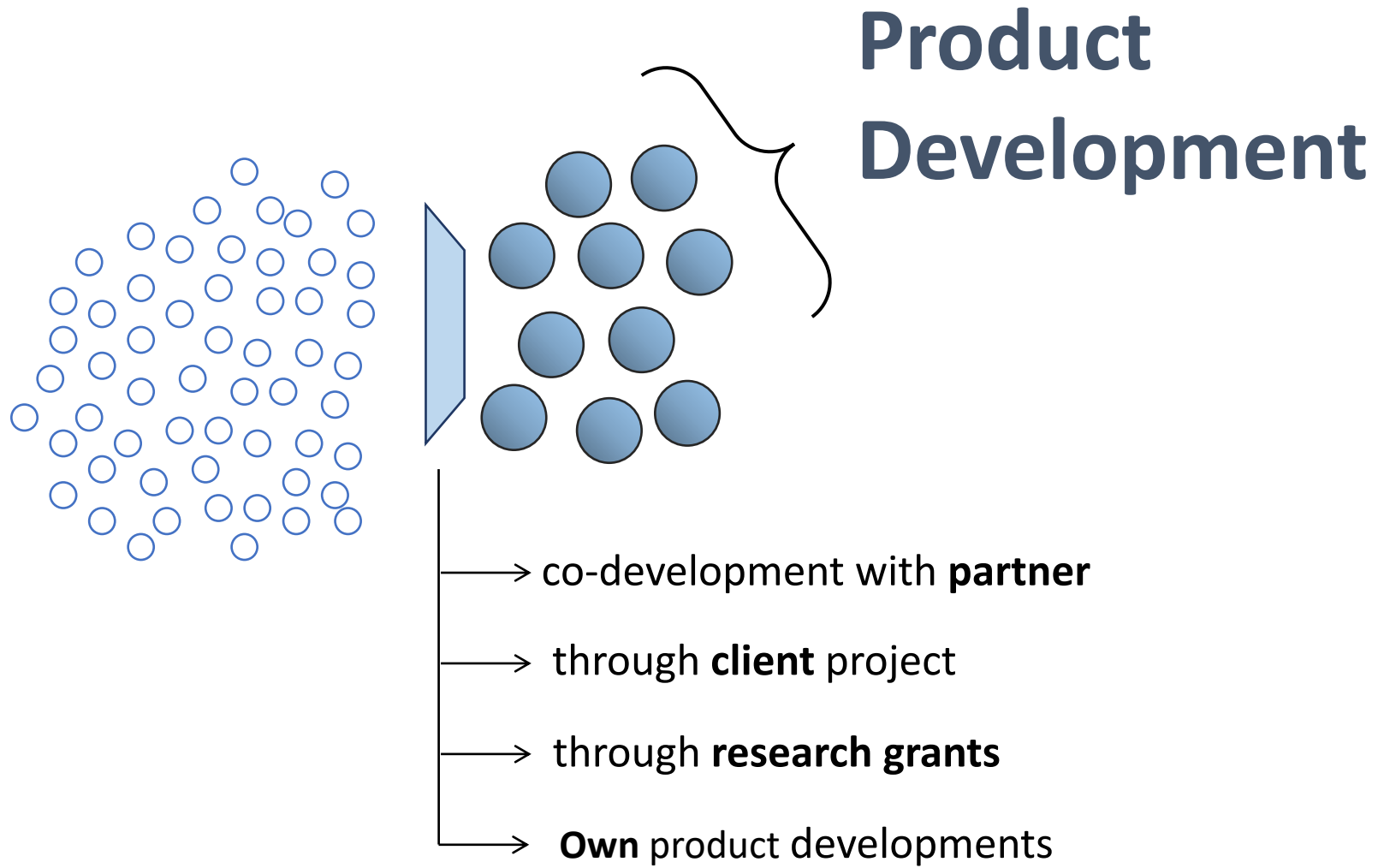
A new Internet of Everything

YDreams Magic: YDX (Toronto, Frankfurt). Aromni, YDreams Entertainment

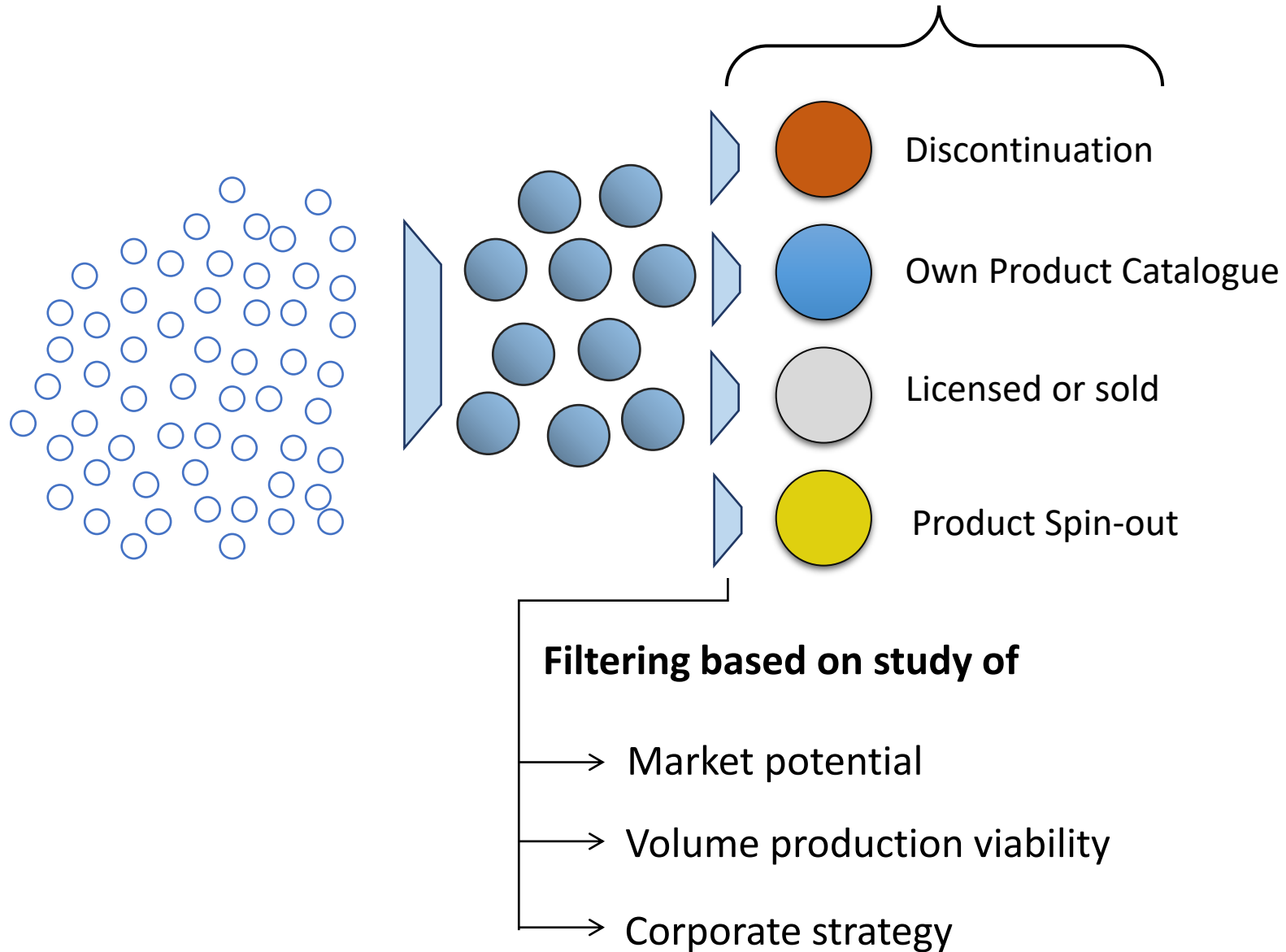


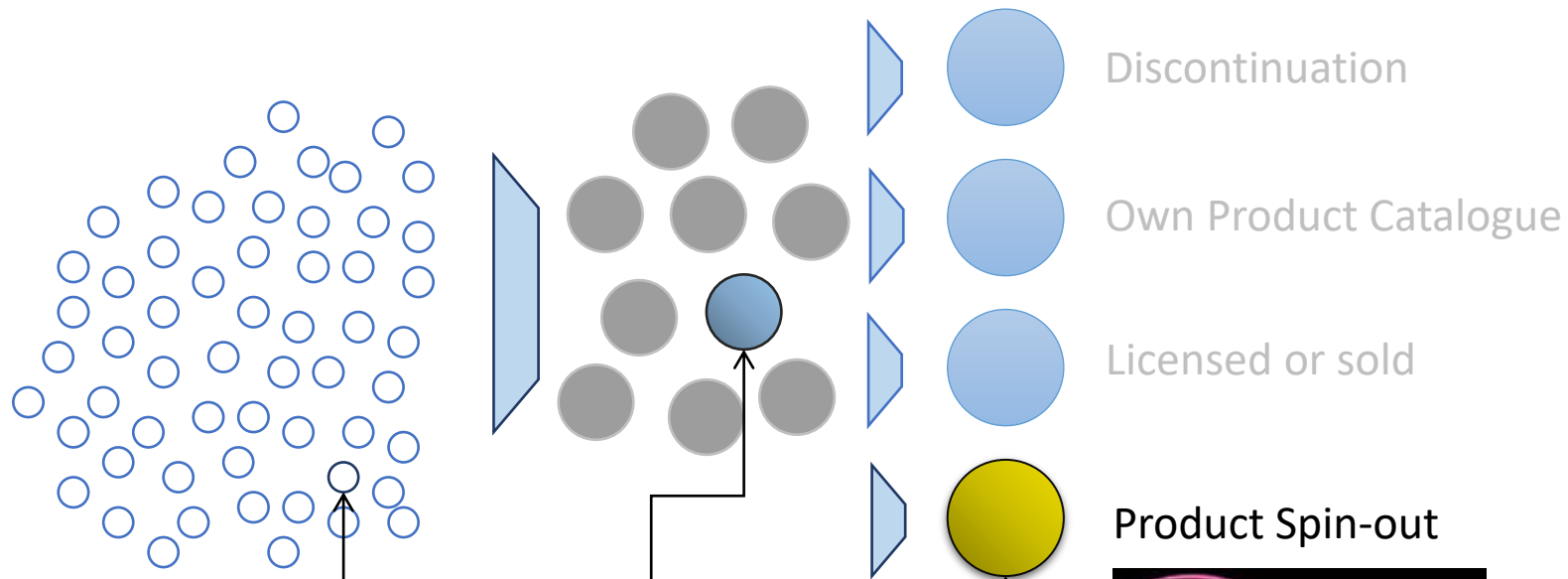
YDreams Excubation Model





Following Steps





**Audience gaming
concept idea**



Aug 2007
Audience gaming client project for
Dove in São Paulo, BR



Joint-Venture, based in NYC, to
explore audience gaming. Has
delivered games to MSNBC, Volvo,
Orange Mobile, Vodafone, Coca-
Cola, Volkswagen, Disney, Redbull,
Nokia, Sony among others

The Model is intended to promote:

Creativity

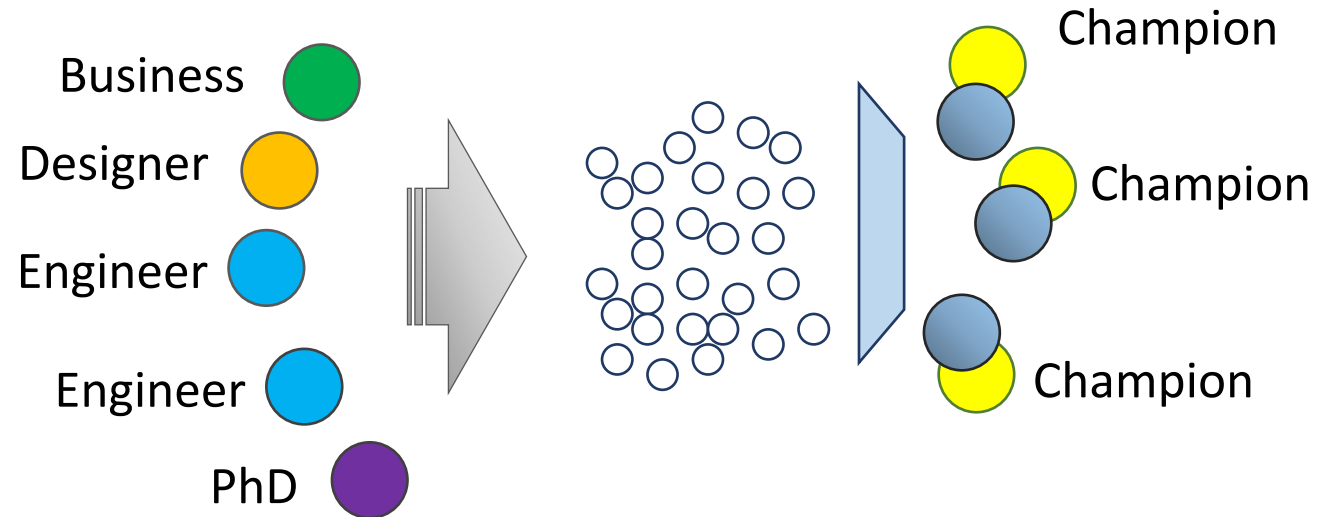
Filtering based on technical, market and business strategy inputs

Quick prototyping and constant market feedback

Minimal risk exposure

End goal: coming up with Killer Applications

Creativity is born out of small, diverse teams



Product ideas need a Champion with the drive to make it succeed.

"Passion is the emotional fuel that drives your vision."

Steve Jobs

Internet of Things

Ynvisible

Listed in Toronto and
Frankfurt

Smart labels

Lisbon, Freiburg, Linköping,
Vancouver



<https://www.teletrader.com/ynvisible-interactive/stocks/details/tts-160188310>

Ocean exploration

Azorean Aquatic Technologies

Listed in Euronext Paris

Aquatic drones,
ocean exploration

Lisbon, Ponta Delgada



<https://youtu.be/H9W1wmlI8YU>

Mobility

Human Mobility Solutions

Micro-vehicles

Human mobility platform

Lisbon, Holland (Michigan)



<https://youtu.be/3qx6KfdQ44A>

The game on
top of the game





Ars Digita layer cake

Ideas

Financing
Marketing & communications
Management

User experience
Content

Technological infrastructure
(applications, platforms, information systems,
operating systems, telecommunications,
power)

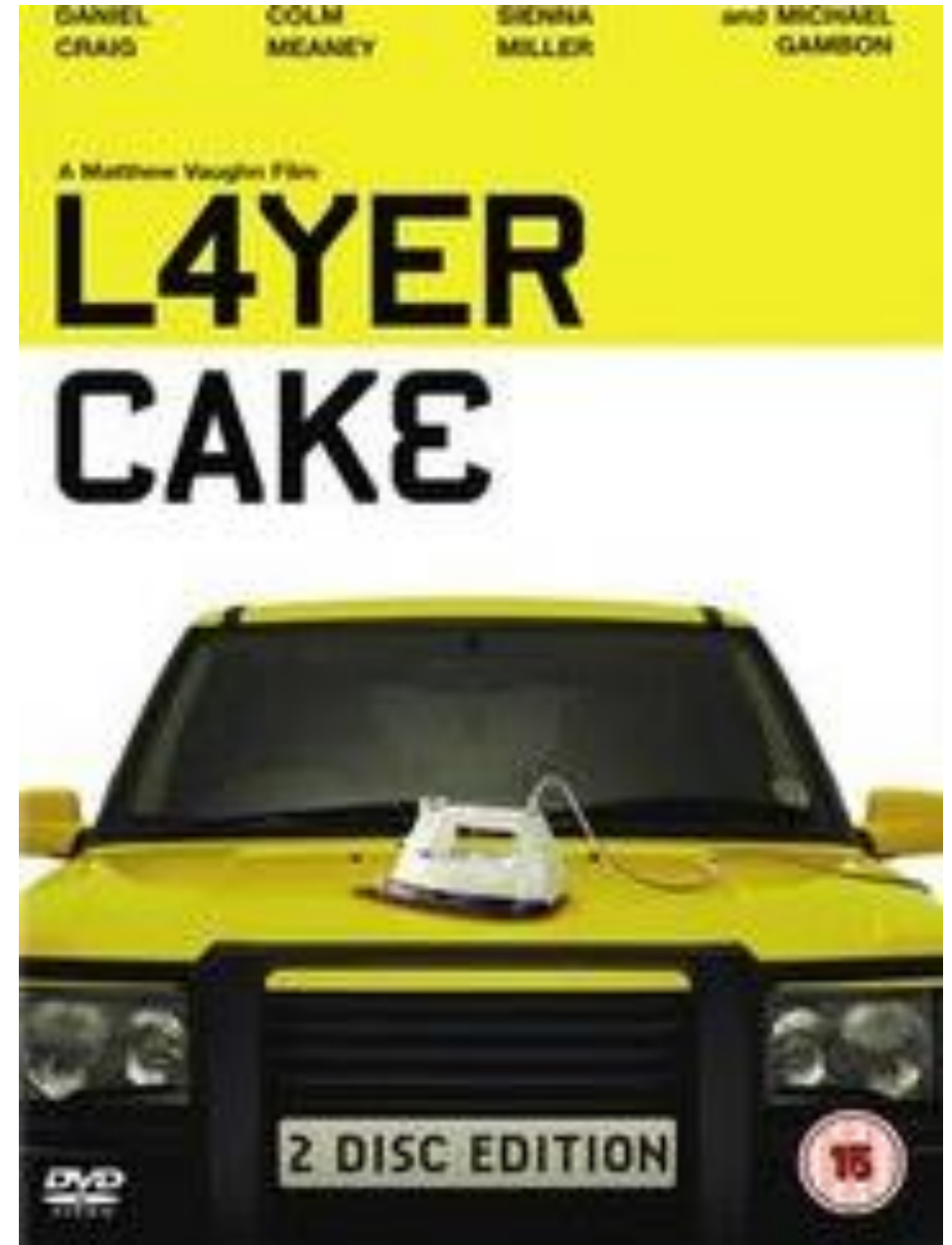
Ars Digita layer cake

Ideas/intellectual property

Financing/business models

Marketing/communication/
sales

Technical pyramid





Ars Digita layer cake

Ideas/
intellectual
property

How It Works

US13/387,135
Electrochromic device with dual function:
display + touch sensor

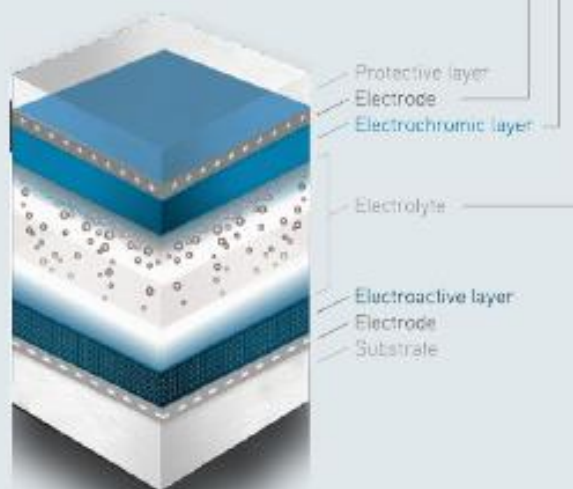
US2012/0182592
Paper electrochromic display



WO2013/095170*
High-performance solid-state electrolyte

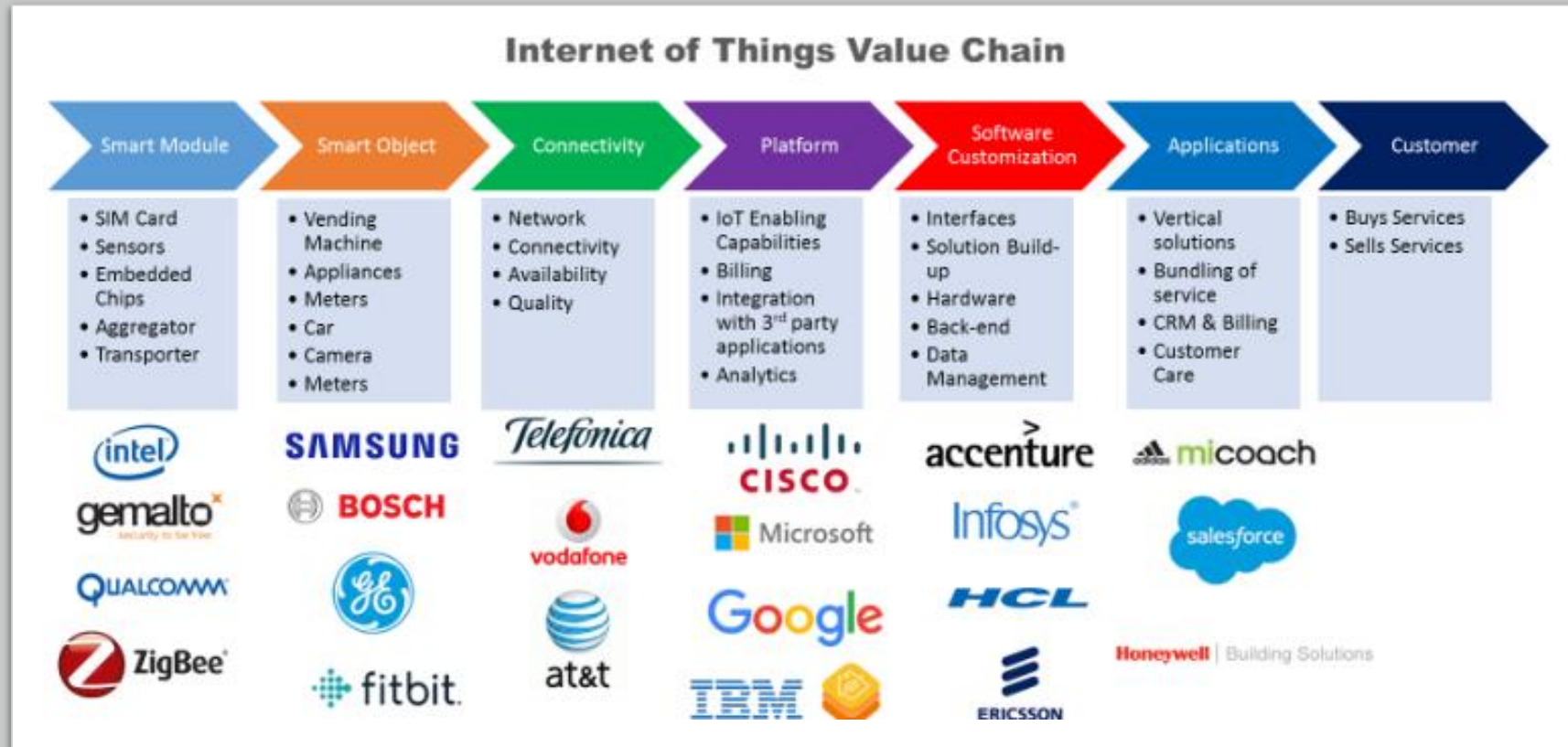
PT103852; PT105152; PT105280; PT104634
Novel electrochromic materials: multiple colors;
new chemistry and materials for smart windows

PT106301*
Process to deposit transparent and
conductive layers on paper



Based on a printed
multi-layer
architecture, ynvisible
displays can be
combined with inks
and electronics into
integrated systems, to
provide total solutions
for global brands.

Intellectual property is protected - 6 patents granted,
2 pending* + proprietary trade secrets.

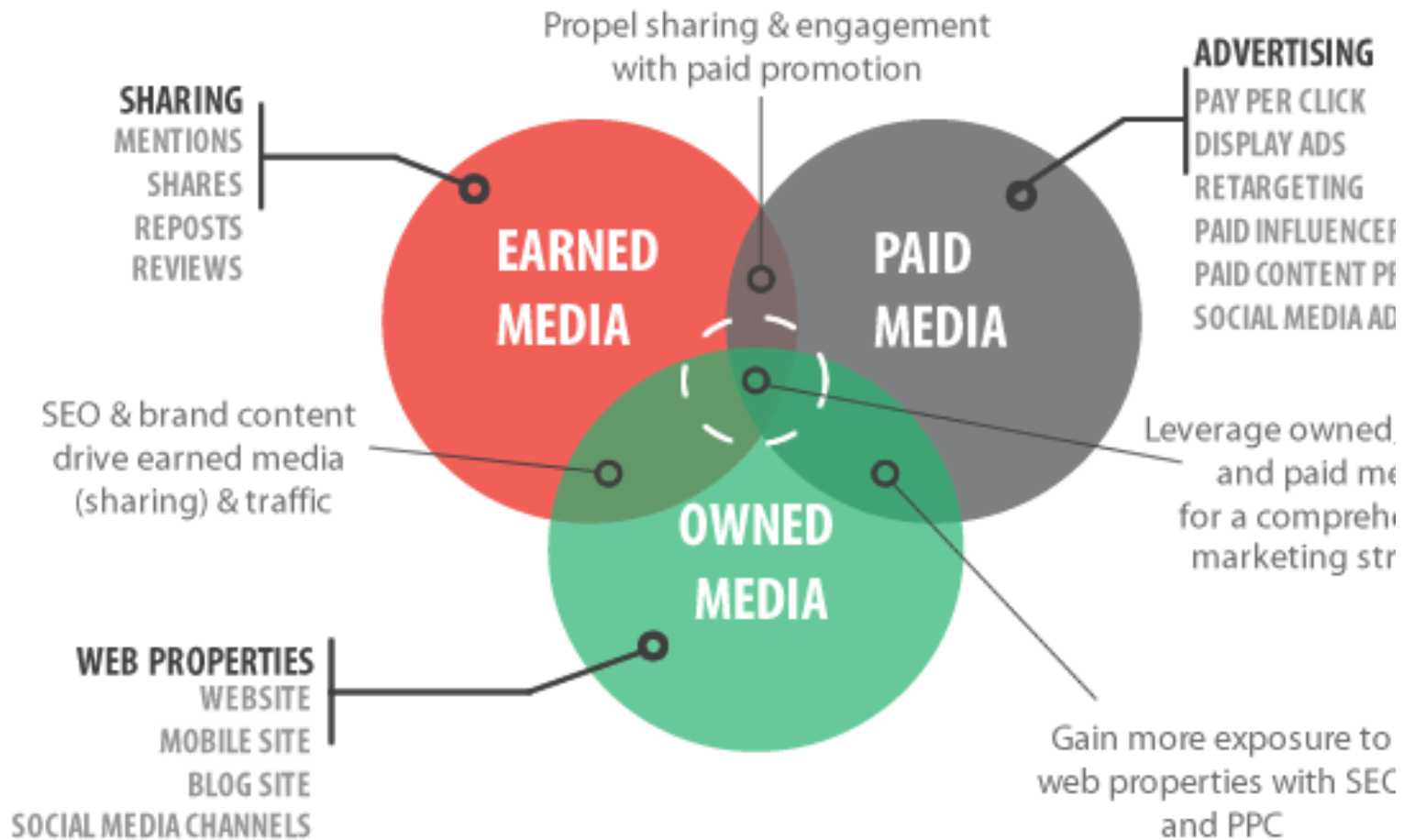


Ars Digita layer cake

Financing/business models

DIGITAL MARKETING TRIFECTA

EARNED, OWNED & PAID MEDIA



Ars Digita layer cake

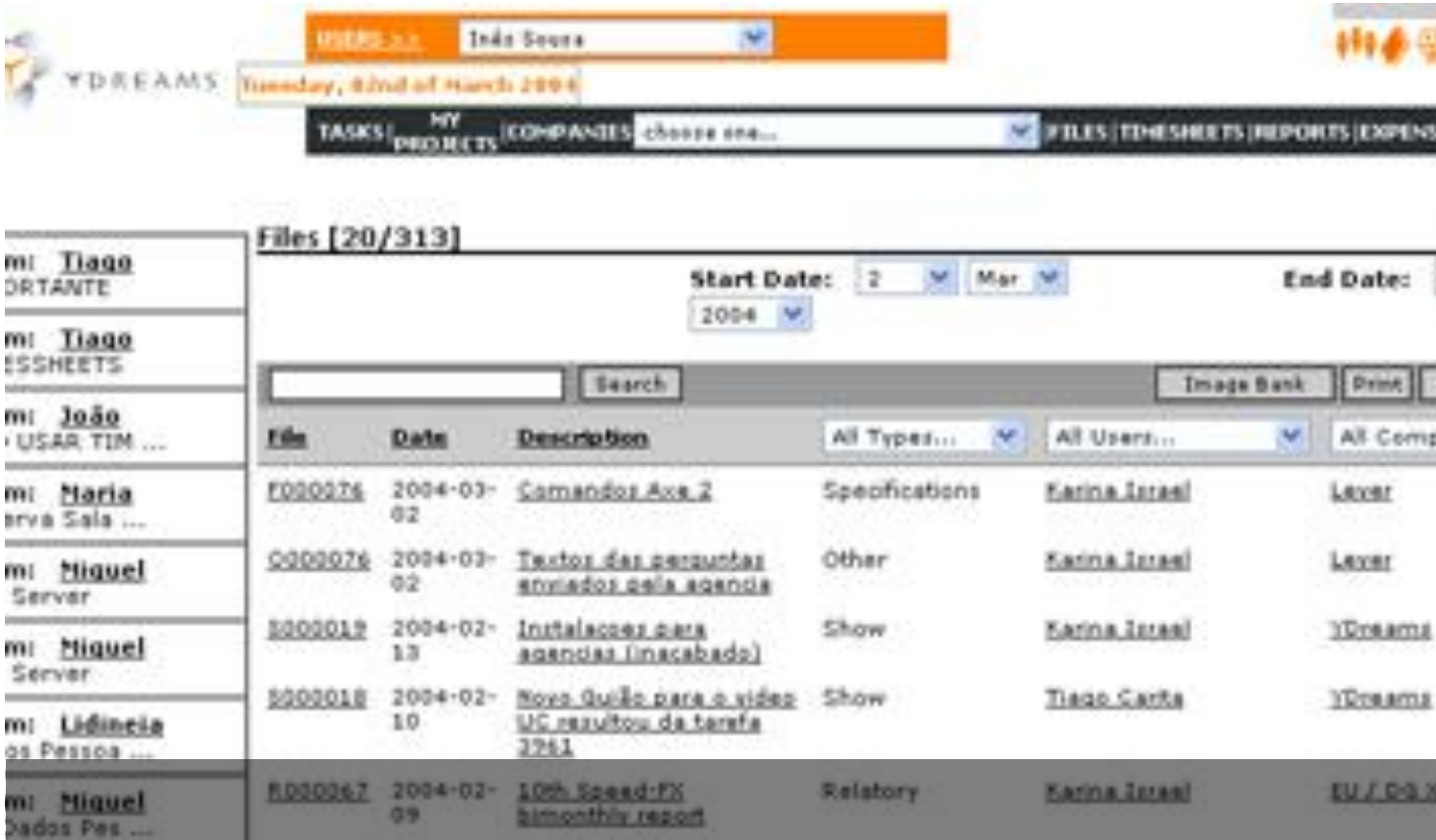
Marketing/com
munications

Ways to generate buzz for your product

1. Release a **remarkable video**
2. Create a **remarkable product demo**
3. Offer a **remarkable value prop**
4. Execute a **remarkable offline stunt**
5. Start a **remarkable controversy**
6. Offer a **remarkable giveaway**
7. Include a **remarkable viral mechanic**
8. Get a **remarkable hard-to-get product** to be shared by **influencers or press**
9. Carry out a **remarkable pre-launch tease**
10. Be **remarkably everywhere**

<https://www.lennyrachitsky.com/>

<https://johnfilipe.com>



The screenshot shows the YDREAMS software interface. At the top, there's a header bar with the YDREAMS logo, a date field showing 'Tuesday, 8th of March 2004', and a navigation bar with tabs for TASKS, MY PROJECTS, COMPANIES, FILES, THESHEETS, REPORTS, and EXPENSE. Below this, there's a 'Files [20/313]' section with a search bar and filters for Start Date (2 Mar 2004) and End Date. The main table lists files with columns for File, Date, Description, All Types, All Users, and All Companies.

File	Date	Description	All Types	All Users	All Companies
E020026	2004-03-02	Comandos Ace 2	Specifications	Karina Israel	Lever
0000076	2004-03-02	Textos das perguntas enviados pela agenda	Other	Karina Israel	Lever
E020019	2004-02-13	Instalações para agendas (inacabado)	Show	Karina Israel	YDreams
E020018	2004-02-10	Novo Guia para o video UG resultados da tarefa 2761	Show	Tiago Costa	YDreams
E020067	2004-02-09	10th Speed: FX bimonthly report	Relatory	Karina Israel	EU / D-3 XY

Ars Digita layer cake

Technical pyramid

“Problem definers”

“Architects”

Researchers and
creative personnel

“Problem solvers”

Project managers

Analysts

Programmers and
designers

Ars Digita layer cake

Hiring the right people

Passion
Energy
Self-assurance
Ability to deal with stress
and ambiguity
Ability to delegate
Ability to inspire
Ability to deliver

Adapted from Guy Kawasaki,
The Macintosh Way, Harper,
1990

*“A players hire A players,
B players hire C
players and C players
hire D players”*

*Steve Jobs in The Art of
the Start, Guy
Kawasaki, 2004*

The Silicon Valley Model

Angel funded start-ups



User Traction
VC Backing



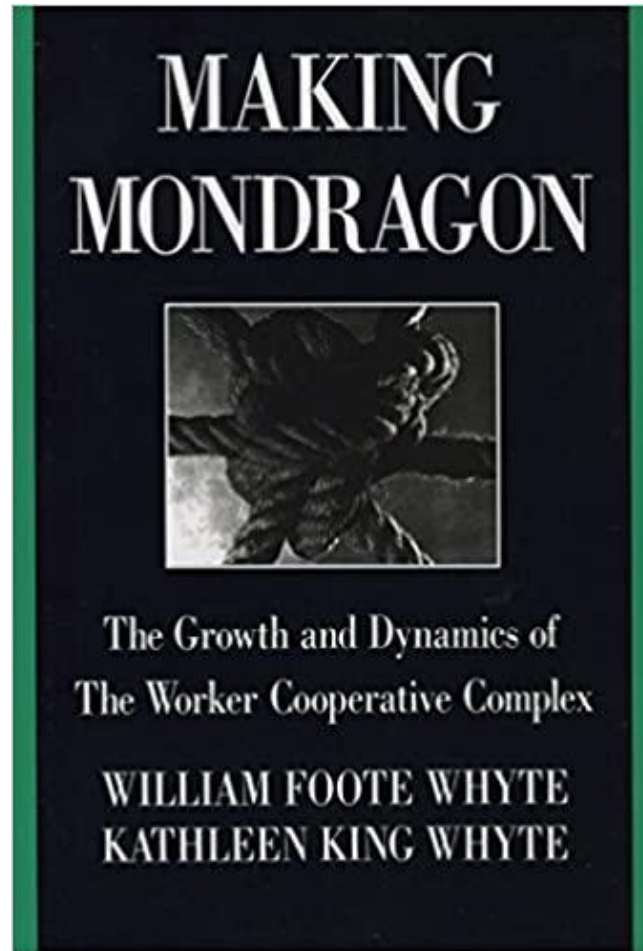
Billions of revenue
Winners



David Galbraith@daveg

Almost no successful VC backed technology startups are based on real technology advances. They are largely about leveraging product network effects and distribution network virality on commoditized technology

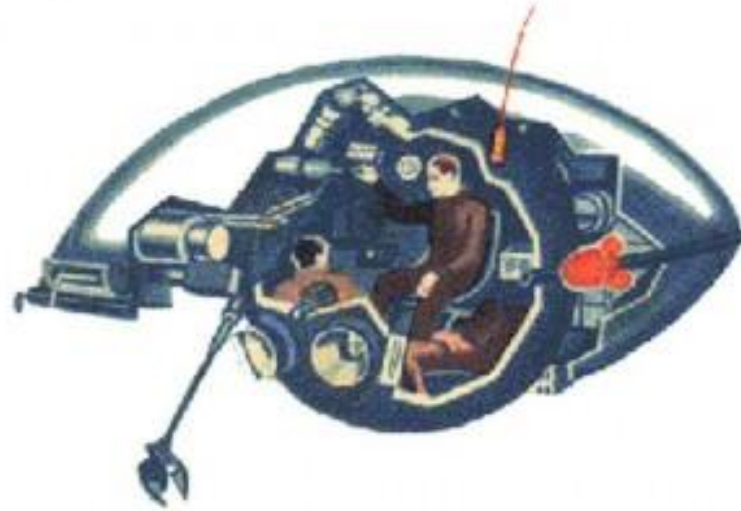
Alternative models



Alternative models



Alternative models



Deep Star 4000

Atlantida Inc.

Innovation key references

Disruptive Innovation: Clayton Christensen

Product Innovation: Ben Thompson

Business Model Innovation: Fred Wilson

Breakthrough Innovation: Peter Thiel

Customer Experience Innovation: Jeff Bezos

Customer Behavior Innovation: Stewart Butterfield

Cultural Innovation: Ed Catmull

Reading list

Mini MBA on technology

http://avc.com/archive/#mba_mondays_archive

Abraham Flexner, The Usefulness of Useless Knowledge, 1939
(<https://library.ias.edu/files/UsefulnessHarpers.pdf>)

Alexander Von Gabain, The EIT: Addressing Societal Changes Via the Integration of the Knowledge Triangle, 2012, (em <http://slideplayer.com/slide/7723914/>)

Clayton Christensen, The Innovator's Dilemma, Harper, 2002
(http://dl4a.org/uploads/doc/The_Innovators_Dilemma.pdf)

Giff Constable, Talking to Humans, author's edition, 2014 (<http://www.talkingtohumans.com/>)

Peter Thiel and Blake Masters, From Zero to One, Crown, 2014 (ver <http://blakemasters.com/peter-thiels-cs183-startup>)

Ralph Waldo Emerson, Self-Reliance (essay), 1841 (<https://math.dartmouth.edu/~doyle/docs/self/self.pdf>)

Randy Hunt, Product Design for The Web, New Riders, 2014

Richard Sennett, The Craftsman, Penguin Books, 2009

Richard Sennett, The Culture of New Capitalism, Yale University Press, 2006

Robert Pirsig, Zen and the Art of Motorcycle Maintenance, Harper, 1974
(<http://www.arvindguptatoys.com/arvindgupta/zen-motorcycle.pdf>)

Steve Johnson, Where Good Ideas Come From, Riverhead, 2010

asc@fct.unl.pt

<https://www.facebook.com/groups/183536175571026>