

INNOVATION STRATEGIES

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January 23rd, 29th and 30th, 2021



AMBA
ACCREDITED



EQUIS
ACCREDITED



FIBAA



AACSB
Business Education
Alliance
Member



UNICON



FT
FINANCIAL
TIMES



2017

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

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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/>

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

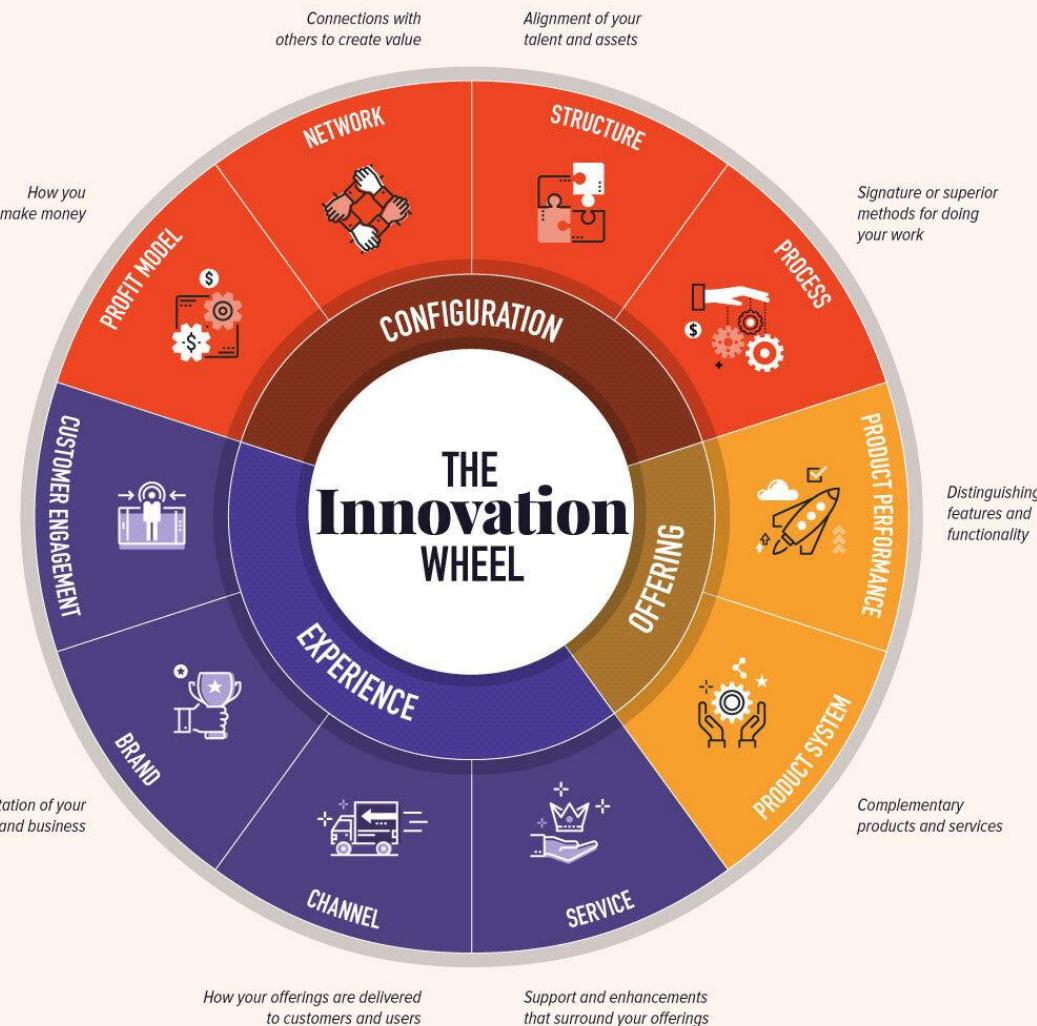
A first pitch on an idea for a product/service (10 slides; group work- 2/3 people)

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)**

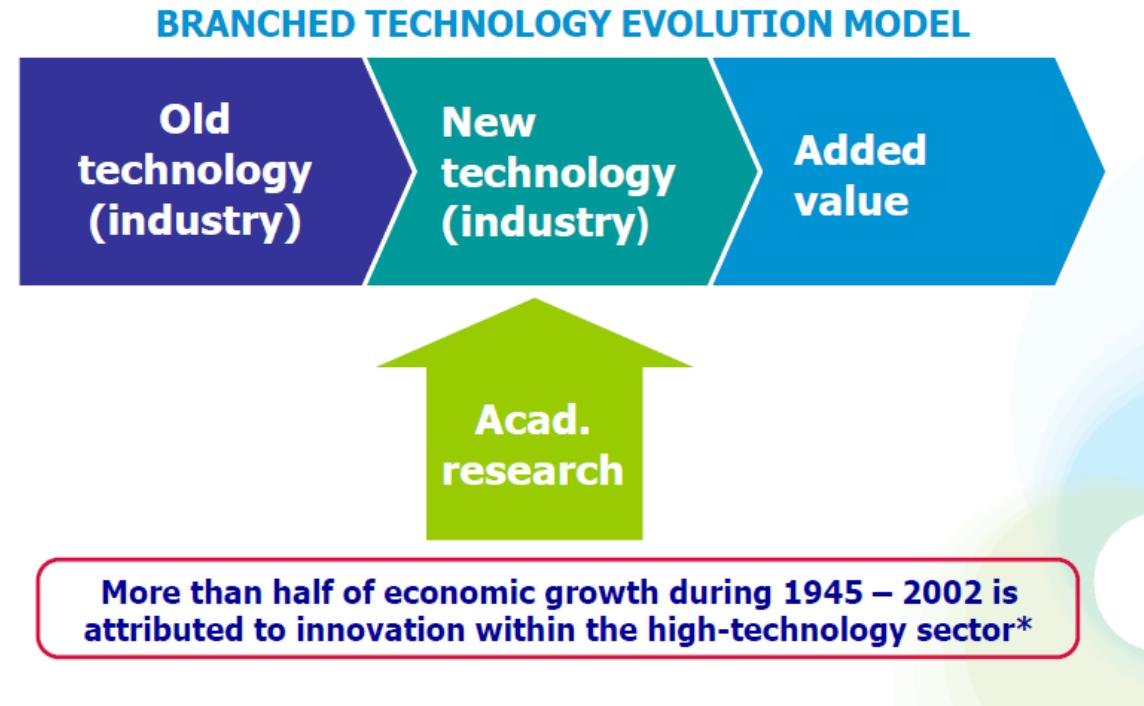


LINEAR TECHNOLOGY EVOLUTION



Californian model

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



* 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

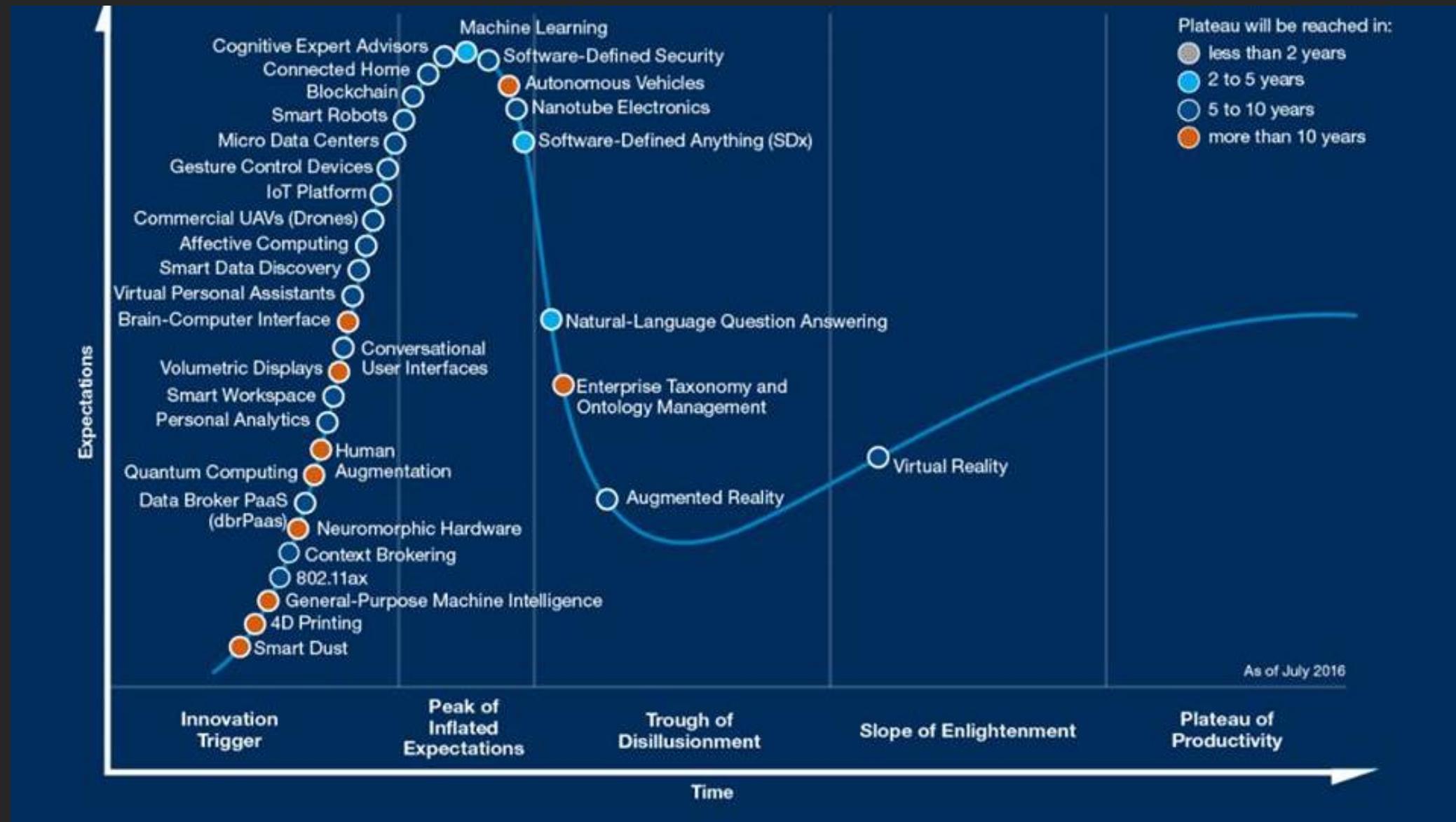
- Observing patterns and using those to make generalizations
- See tire tracks in snow; a car was here

Abductive

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

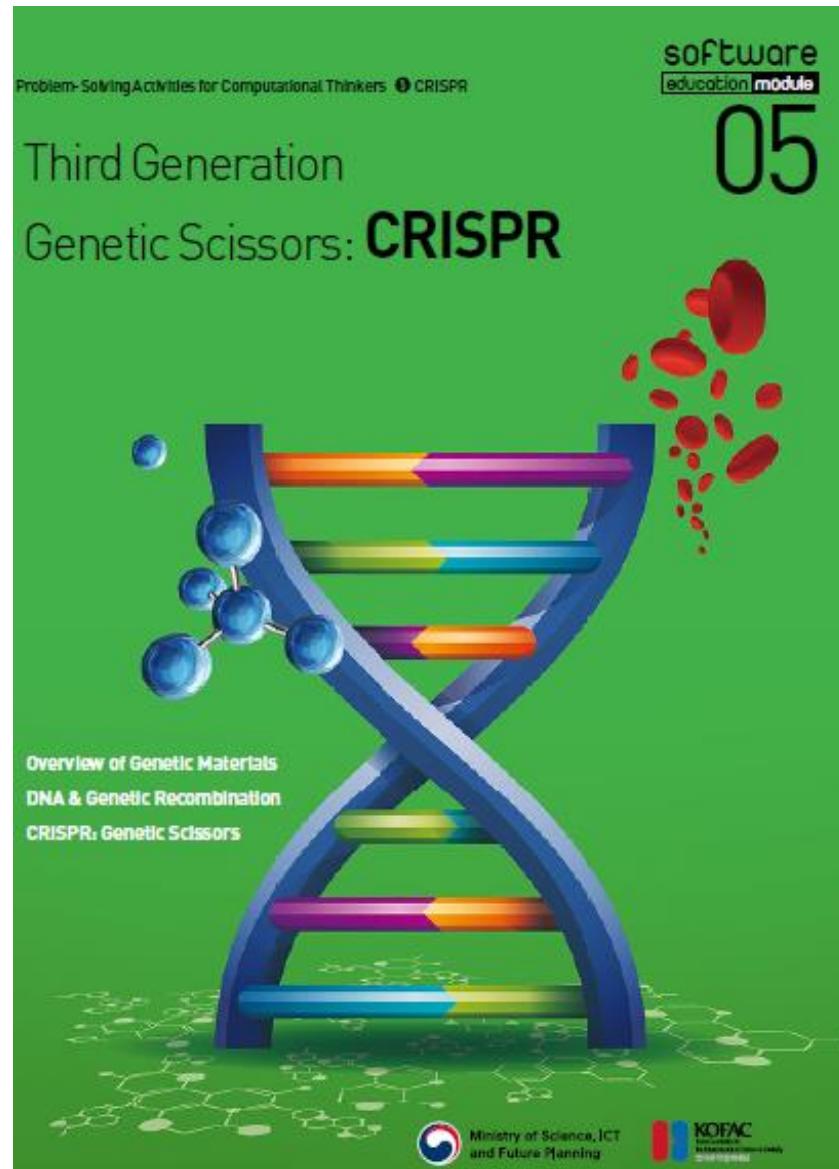
ML	IQ	DE	NE	CA	Cn	BA	Bg	Ew	Bs
Qi	B5	Qs	As	Bi	Rm	No	Zp	Cc	Ac
Di	Ea	Pc	AA	Cs	Sb	Dd	Nz	Om	4D
		Re	PM	Mb	Im	Br	Ow	Ht	Mc
		Hc	Vi	Cr	Al	Tc	Hb		

[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



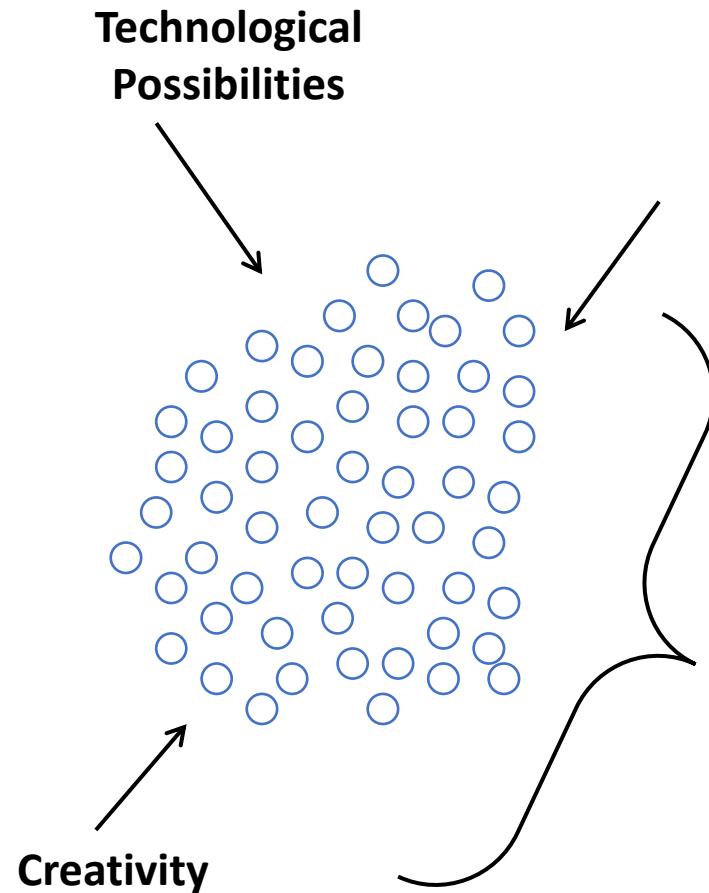
Bridging the Real and Data Worlds

A new Internet of Everything

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

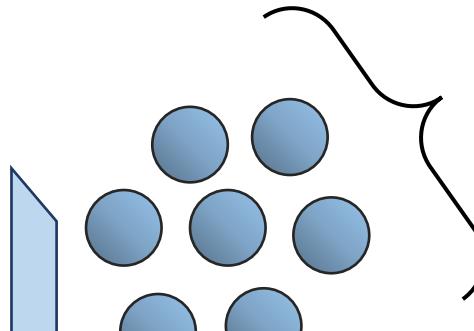
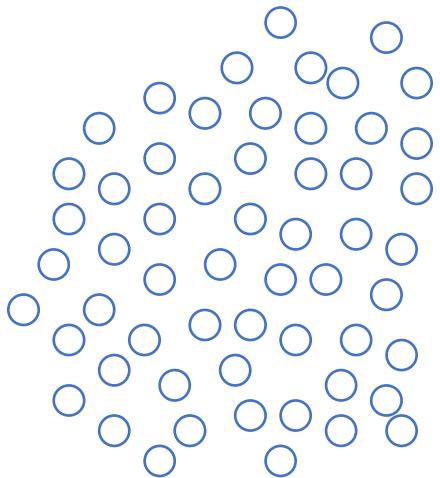


YDreams Excubation Model



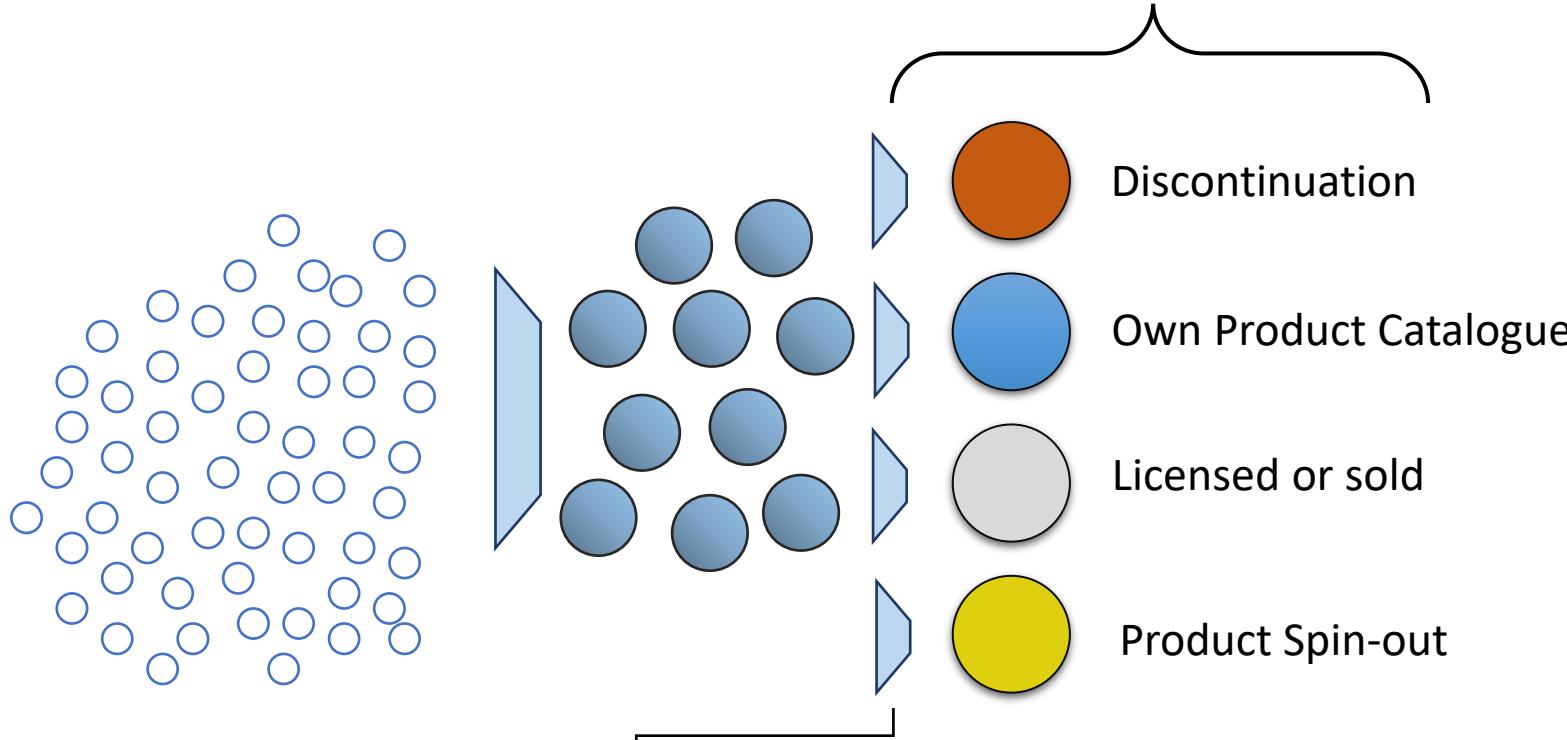
Early Product ideation

Product Development



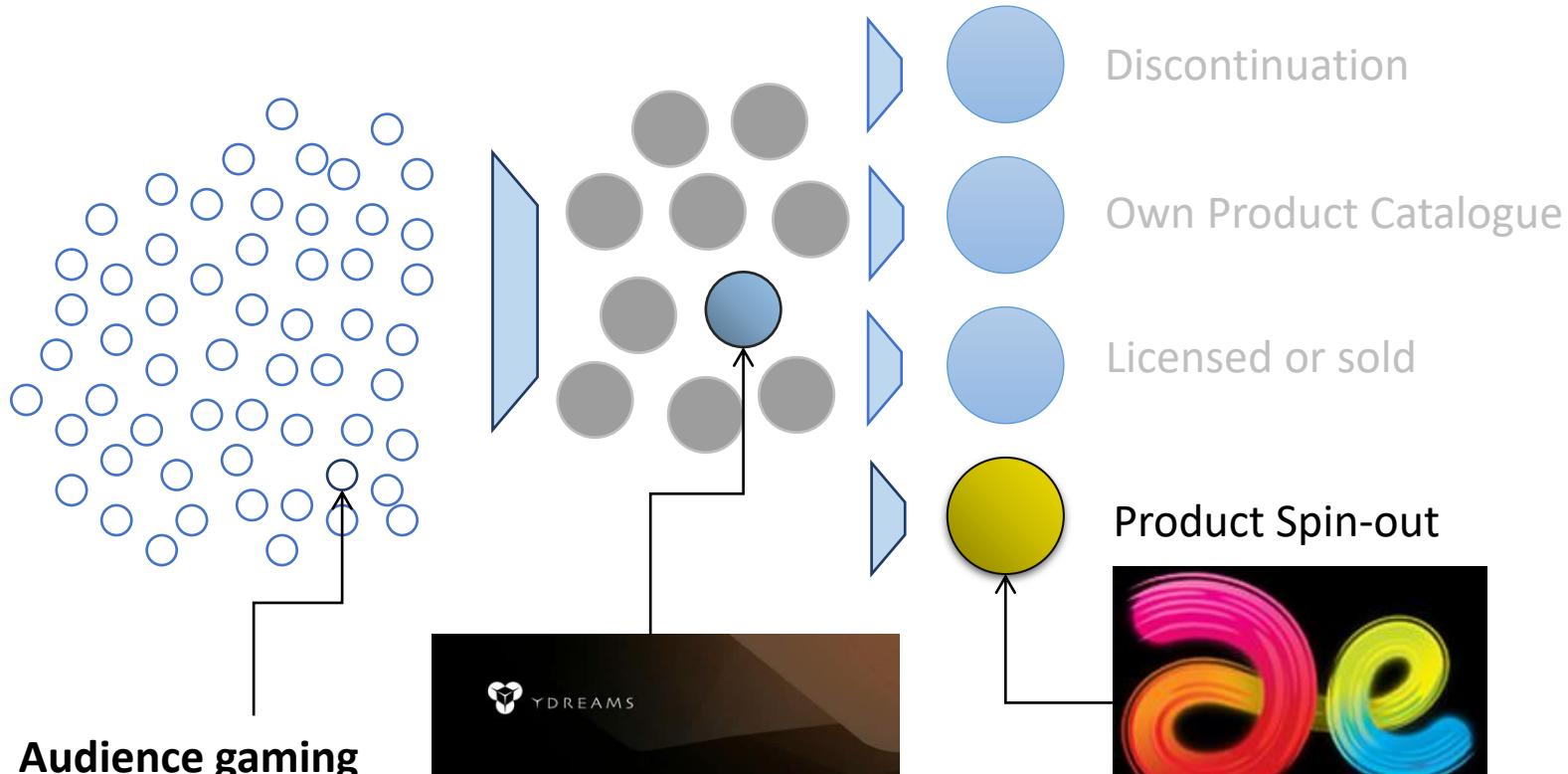
- co-development with **partner**
- through **client** project
- through **research grants**
- **Own** product developments

Following Steps



Filtering based on study of

- Market potential
- Volume production viability
- Corporate strategy



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

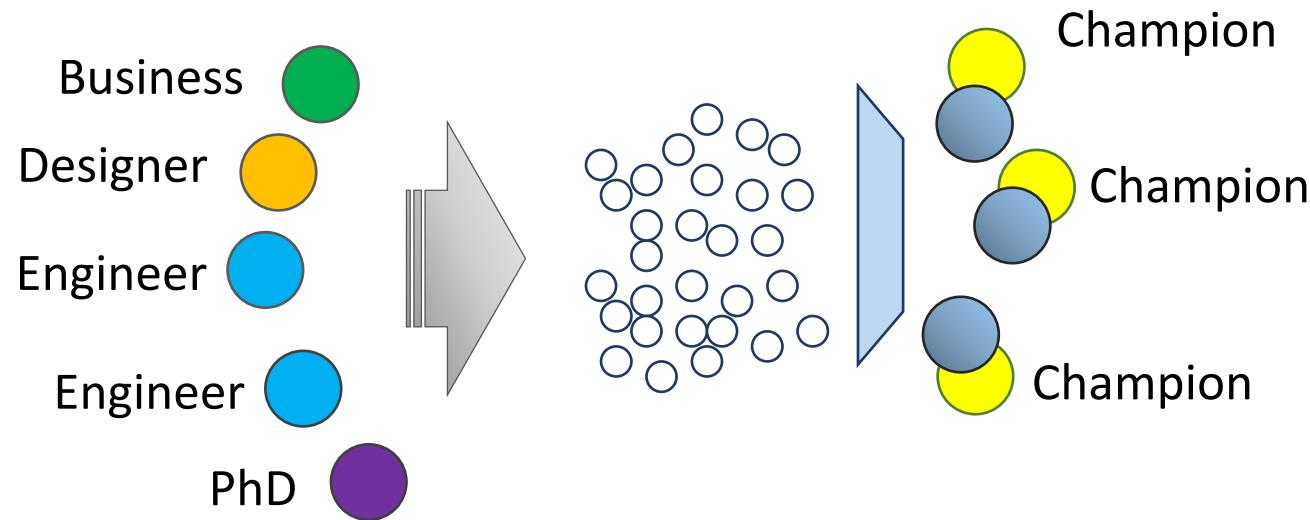
Filtering based on technical, market and business strategy inputs

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, Linkoping,
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/H9W1wmII8YU>

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)

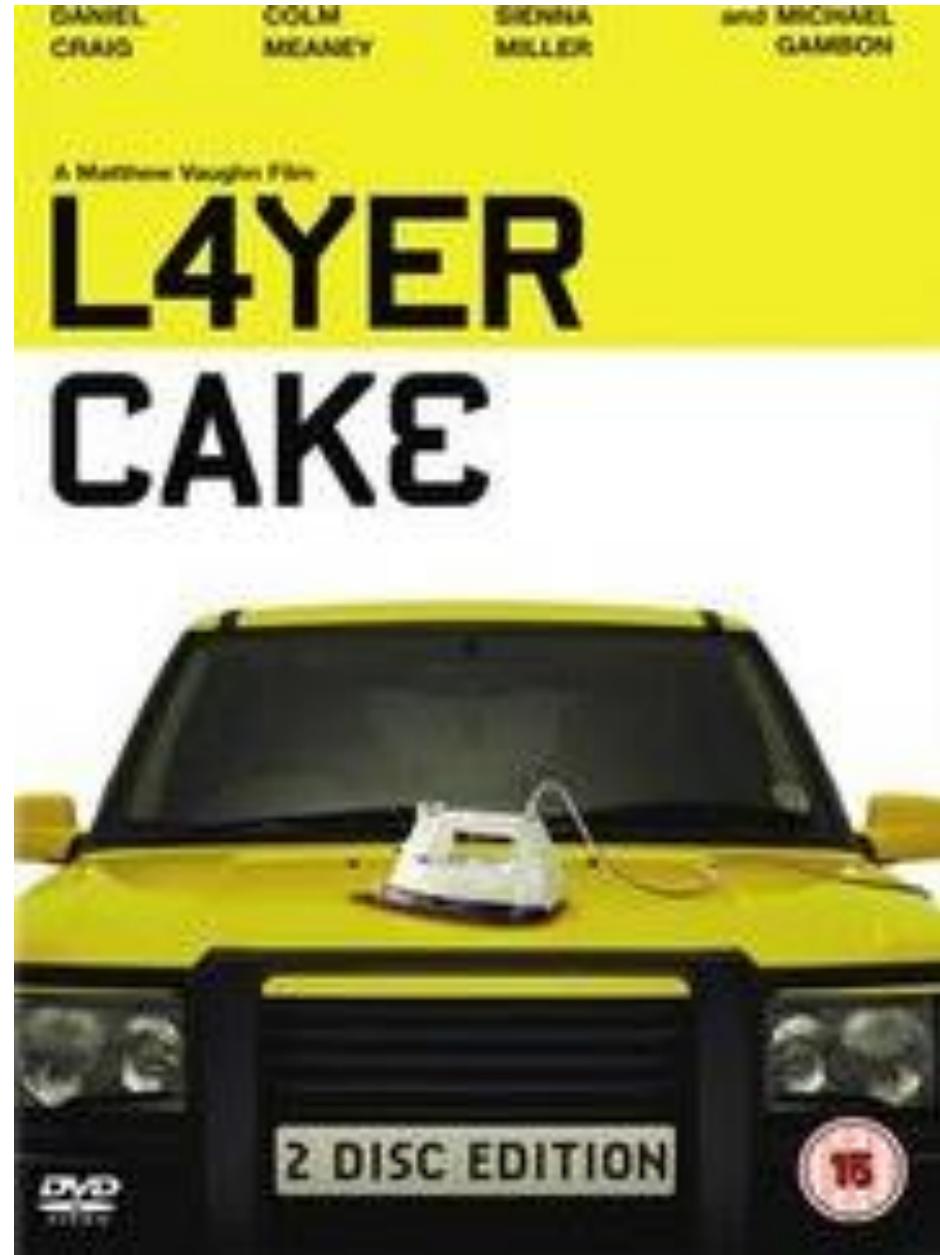
Ars Digita layer cake

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

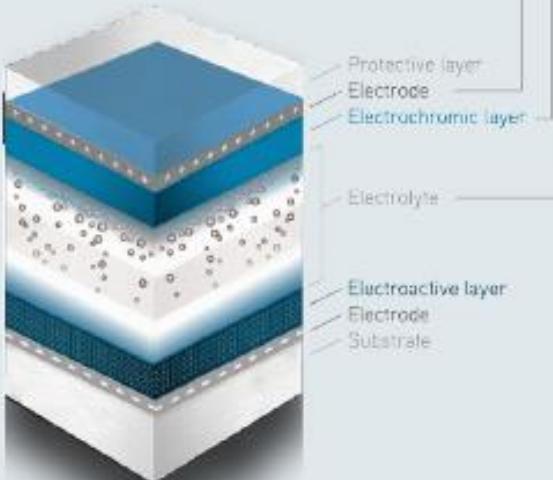
US2012/0182592
Paper electrochromic display



WO2013/095170*
High-performance solid-state electrolyte

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

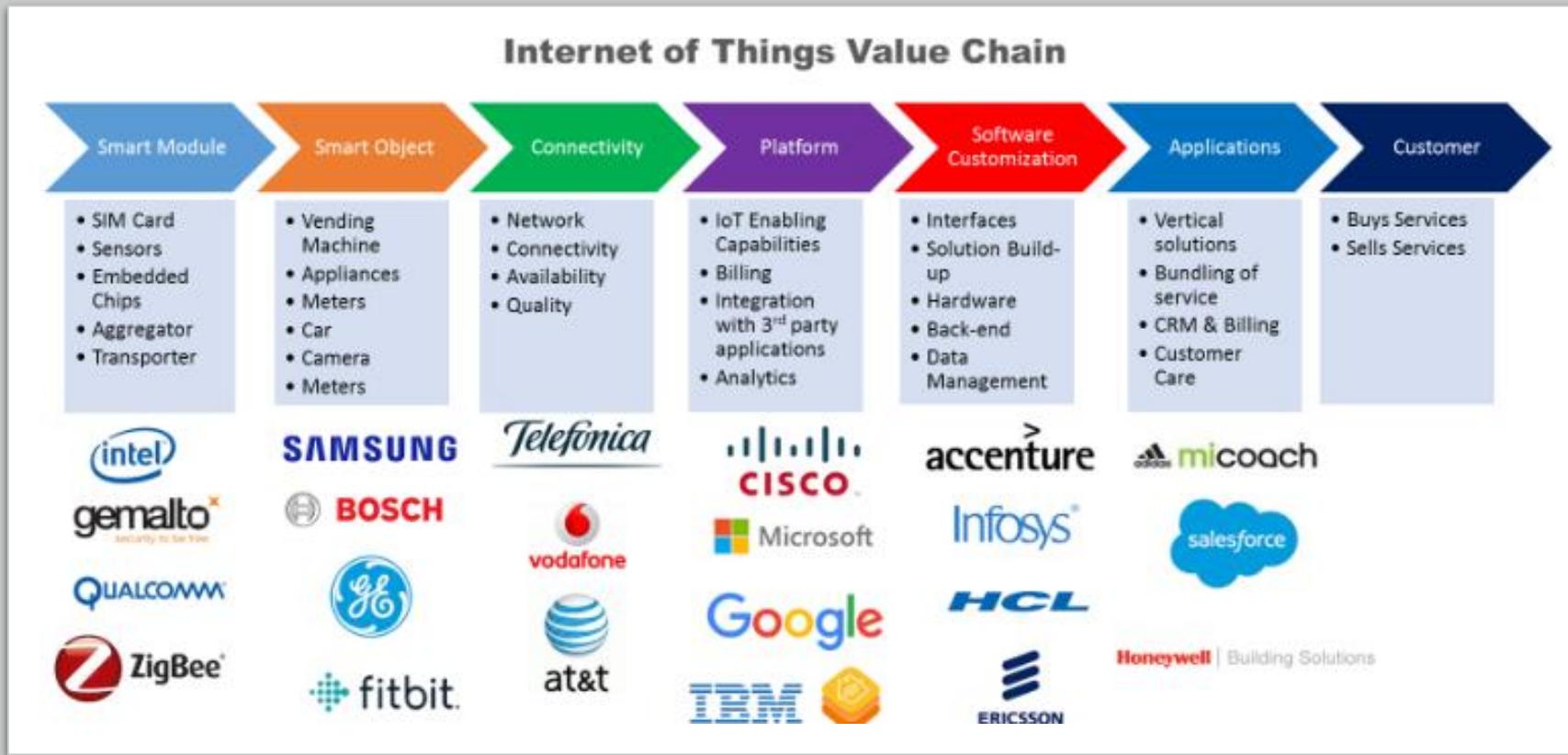
PT106301*
Process to deposit transparent and
conductive layers on paper



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.

ynvisible

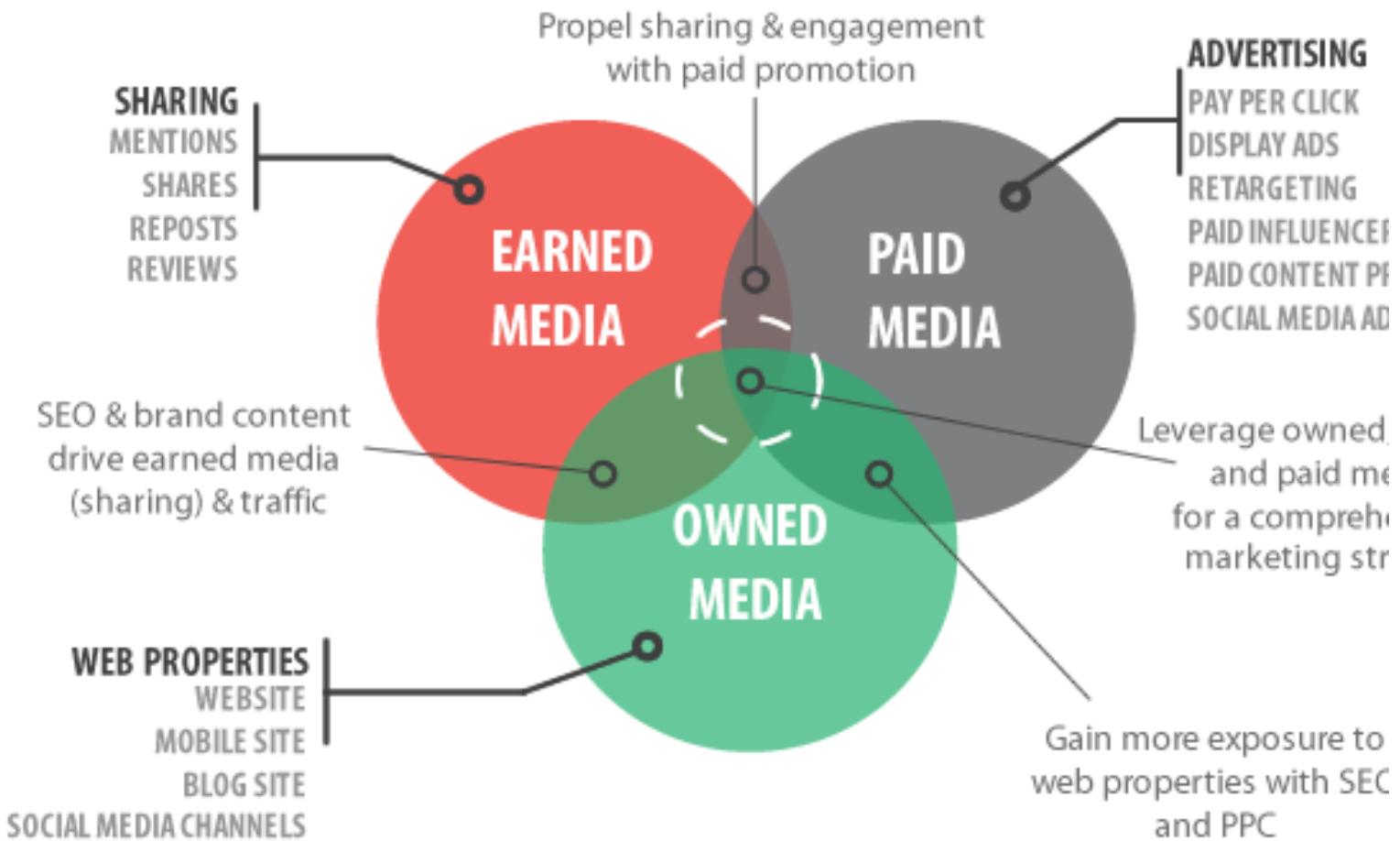


Ars Digita layer cake

Financing/business models

DIGITAL MARKETING TRIFECTA

EARNED, OWNED & PAID MEDIA



Ars Digita
layer cake

Marketing/communications

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 a software interface with a navigation bar at the top. The bar includes a logo, the text 'YDREAMS', 'Tasks Search', and the date 'Tuesday, 4th of March 2004'. Below the bar are menu items: 'TASKS', 'MY PROJECTS', 'COMPANIES' (with a sub-menu 'choose one...'), and 'FILES | EXCEL SHEETS | REPORTS | EXPENSE'. The main area is titled 'Files [20/313]' and contains a table with columns: 'File', 'Date', 'Description', 'Type', 'User', and 'Company'. The table lists several files, including 'Comandos_Aux_2', 'Textos_das_perspectivas', 'Instalações para a academia (inacabado)', 'Novo_Guião_para_o_vídeo_UC_resulou_da_tarefa_2761', and '10th_Squad-FX_bimonthly_report'. The interface includes a search bar and buttons for 'Image Bank', 'Print', and 'Report'.

File	Date	Description	Type	User	Company
E000076	2004-03-02	Comandos_Aux_2	Specifications	Katina.Izrael	Levstar
O000076	2004-03-02	Textos_das_perspectivas	Other	Katina.Izrael	Levstar
E000042	2004-02-13	Instalações para a academia (inacabado)	Show	Katina.Izrael	Levstar
E000048	2004-02-10	Novo_Guião_para_o_vídeo_UC_resulou_da_tarefa_2761	Show	Tiago.Costa	Levstar
E000067	2004-02-09	10th_Squad-FX_bimonthly_report	Report	Katina.Izrael	EU / Rio XD

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

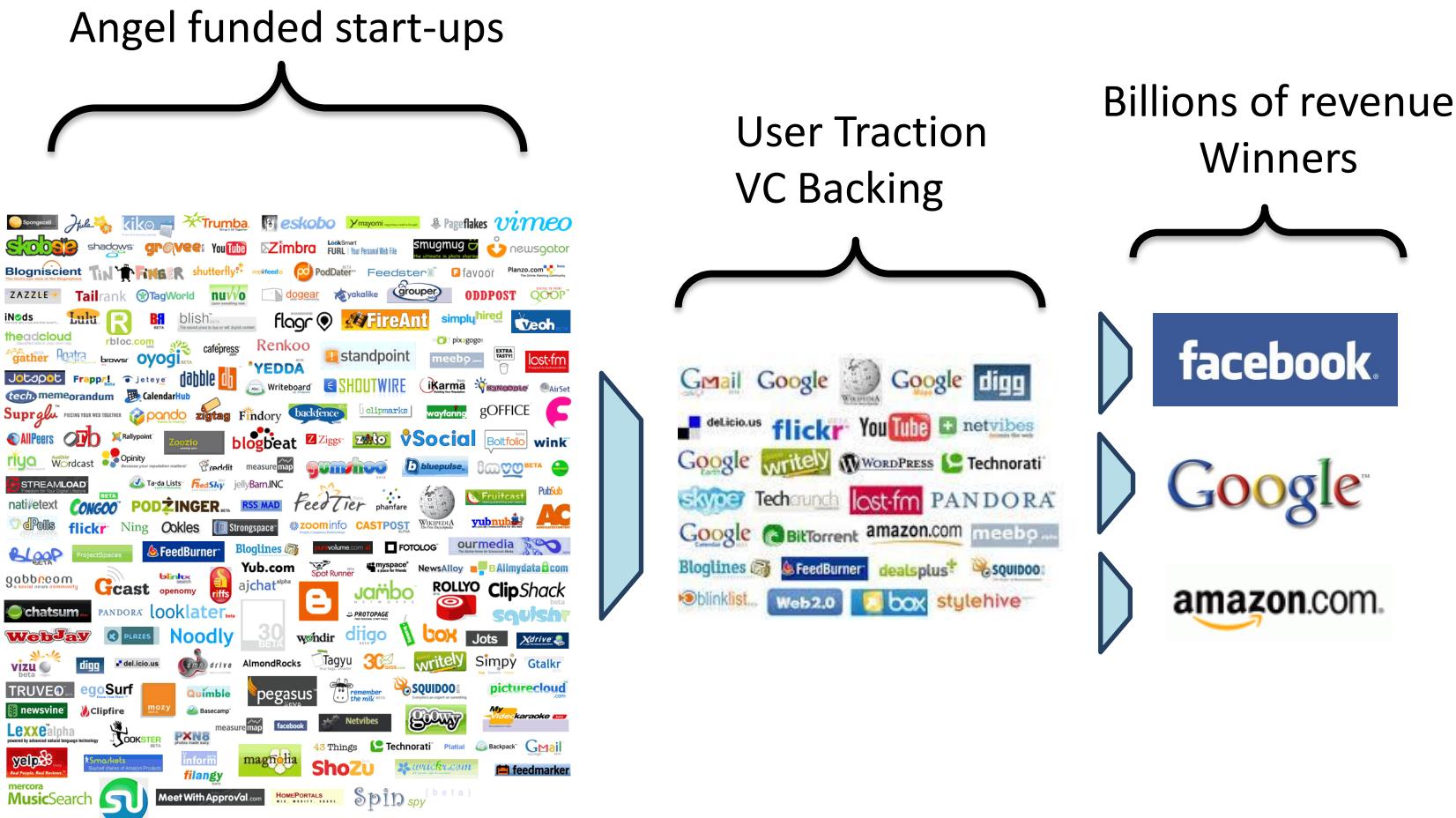
Passion
Energy
Self-assurance
Ability to deal with stress
and ambiguity
Ability to delegate
Ability to inspire
Ability to deliver

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

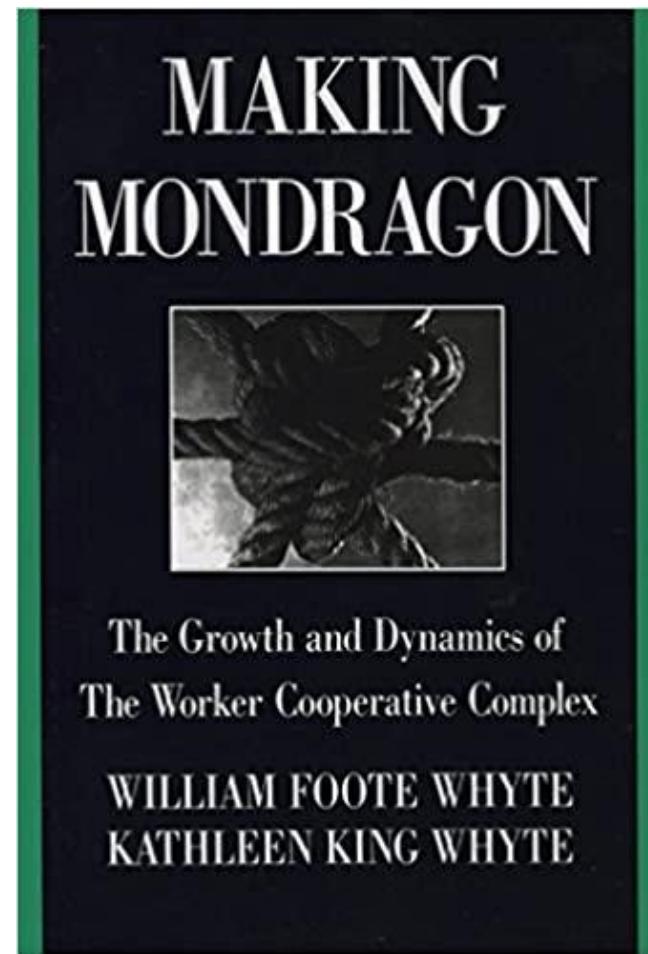


Picture Credits: [Ludwig Gatzke](#)

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

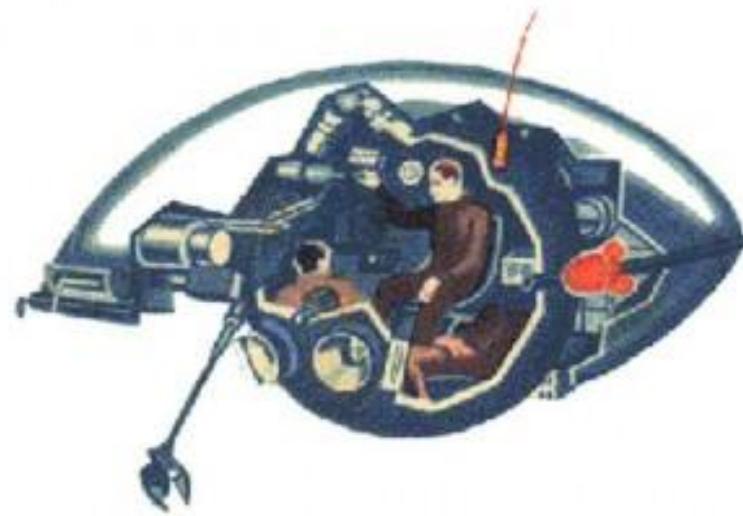
Alternative models



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>