

ITPDP 2026

Innovation and Basic Business Modeling for IT-products

Kaj Grønbæk

PROGRAM

- › Part 1: Innovation Perspectives
 - › What is Innovation?
 - › Incremental vs. radical innovation

- › Part 2: Basic Business Modeling
 - › Business Model Canvas method



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INNOVATION



SOME DEFINITIONS OF INNOVATION?

The classic definitions of **innovation** include:

1. *the **process of making improvements by introducing something new***
2. *the act of introducing something new: something newly introduced* ([The American Heritage Dictionary](#)).
3. *the process of translating new ideas into tangible societal impact* (Krisztina Holly, Vice Provost, University of Southern California, and Executive Director of USC Stevens Institute for Innovation)
4. *the introduction of something new.* ([Merriam-Webster Online](#))
5. *a new idea, method or device.* (Merriam-Webster Online)
6. *the **successful exploitation of new ideas*** ([Department of Trade and Industry, UK](#)).
7. *change that creates a new dimension of performance* [Peter Drucker](#) (Hesselbein, 2002)
8. *A creative idea **that is realized*** [(Frans Johansson)] (Harvard Business School Press, 2004)
9. *"The capability of **continuously realizing** a desired future state"* ([John Kao, The Innovation Manifesto, 2005])
10. "The staging of value and/or the conservation of value." (Daniel Montano 2006.)[\[1\]](#)

(wikipedia.org)

THREE INNOVATION MODELS (TUOMI)

Heroic Innovation Model

- Ex. Thomas A. Edison, James Watt, Tim Berners-Lee,...

Combinatorial Model (“LEGO model”)

- Ex. World Wide Web

Organic Model

- Ex. Linux, Apache, Wiki and other open source

See more on....

<http://www.meaningprocessing.com/personalPages/tuomi/articles/NetworksOfInnovationSummit07.pdf>

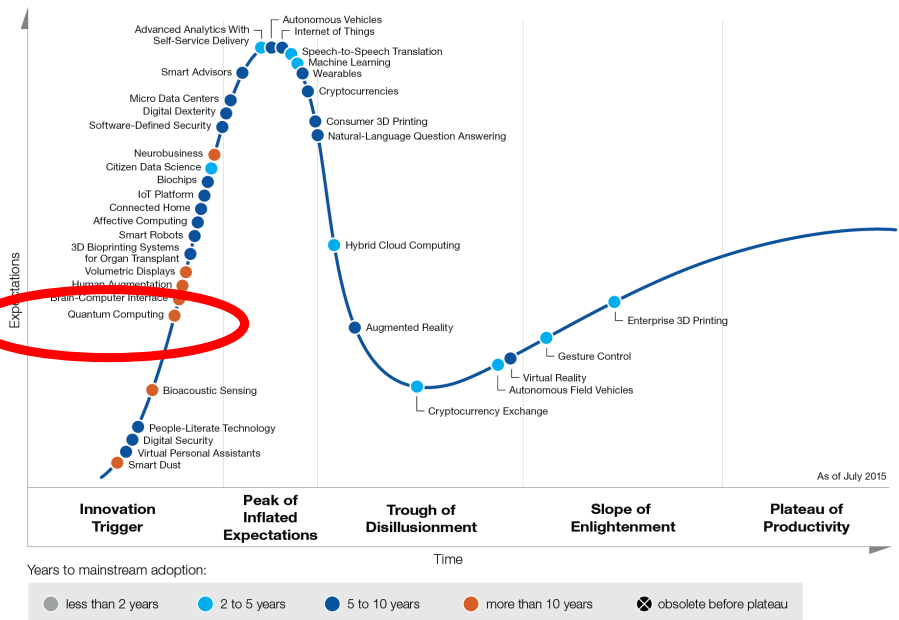


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HYPE, DREAMS AND HOPES 😊

Emerging Technology Hype Cycle



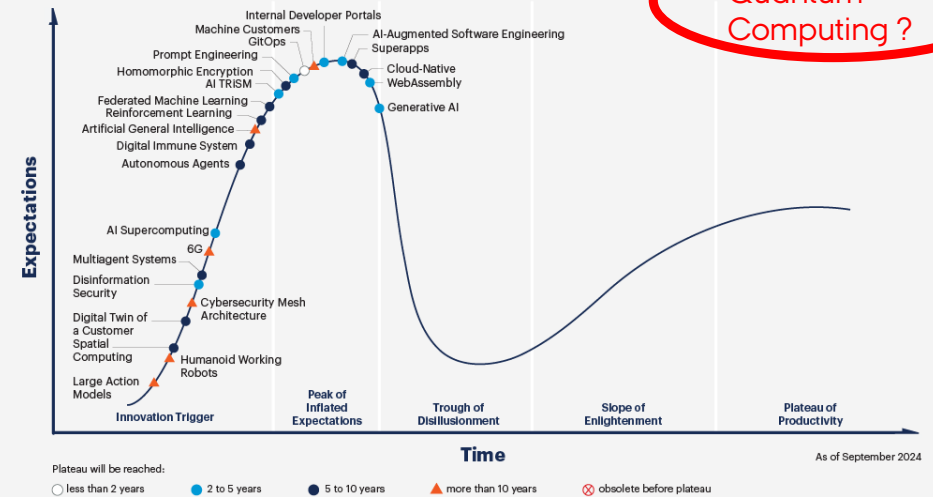
gartner.com/SmarterWithGartner

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Gartner

Hype Cycle for Emerging Technologies 2024

Quantum Computing ?



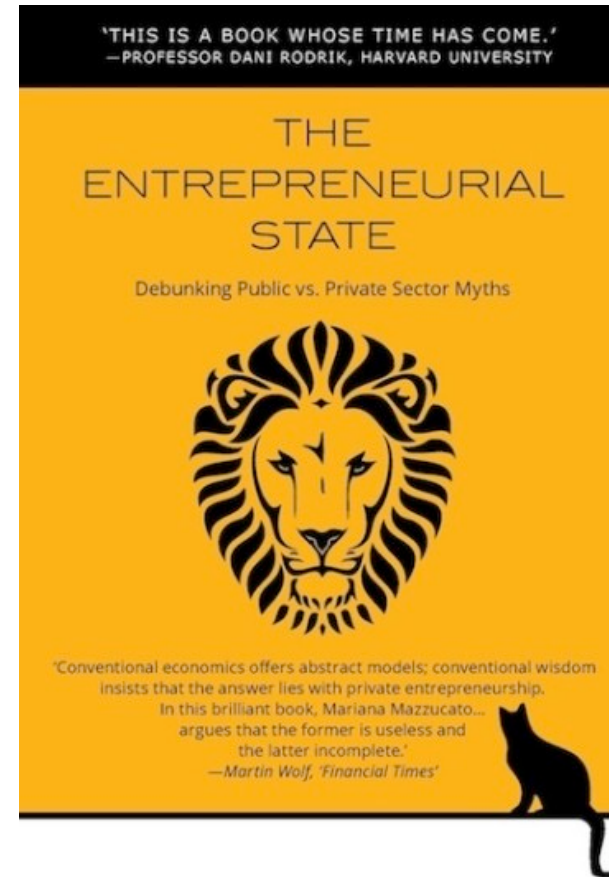
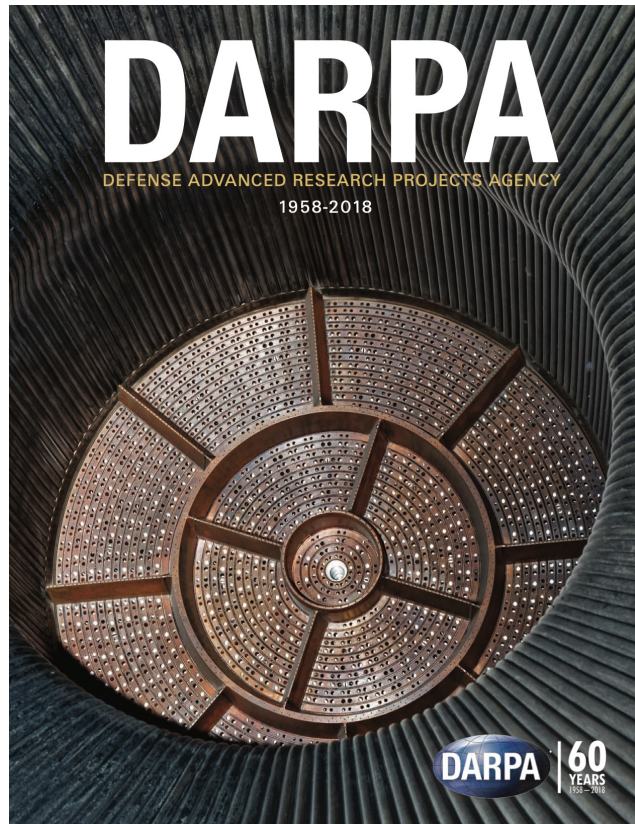
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INVENTION, INNOVATION AND FUNDING



INNOVATIONS OFTEN BUILD ON STATE INVENTIONS

What Makes the iPhone so Smart?

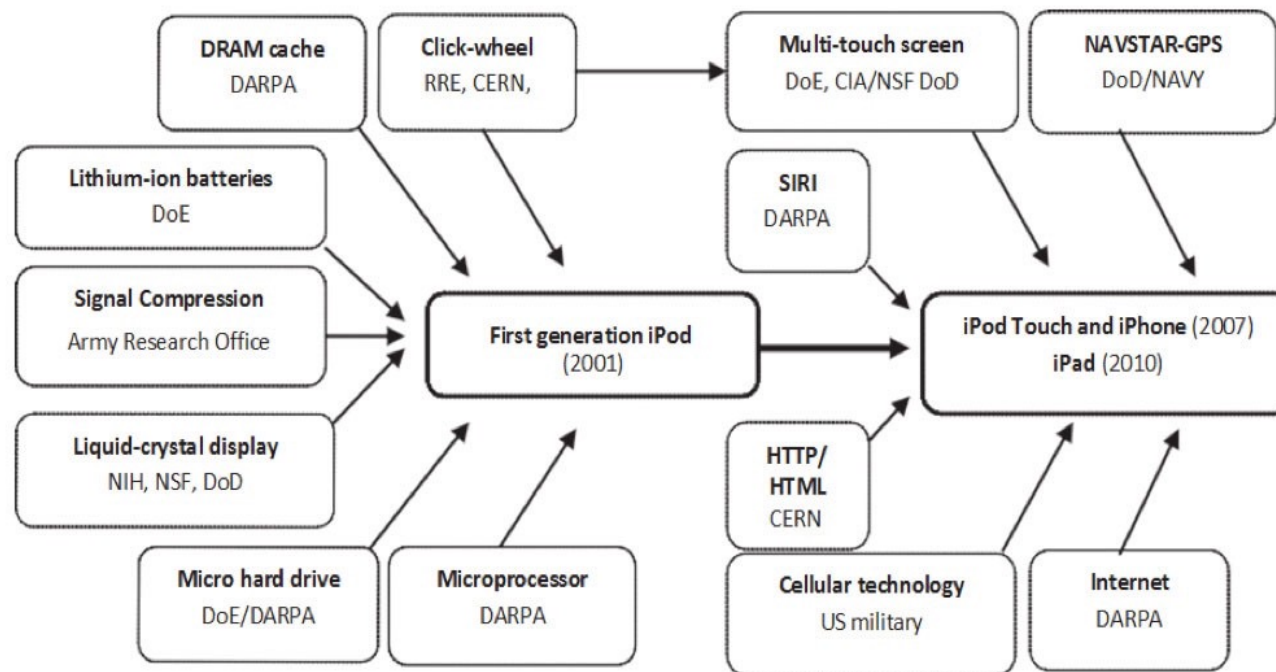


Figure 13 from *The Entrepreneurial State: debunking public vs. private sector myths* (2015, p. 116)

DONALD A. NORMAN & ROBERTO VERGANTI

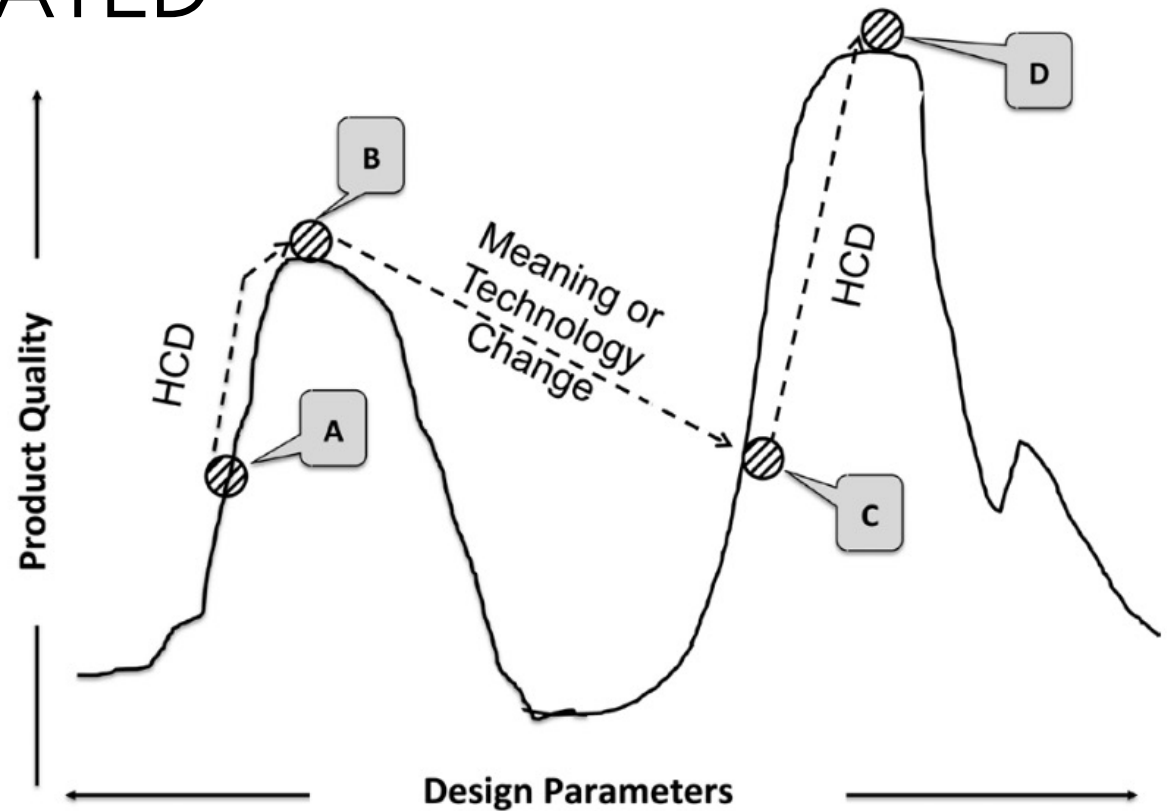
INCREMENTAL AND RADICAL INNOVATION: DESIGN RESEARCH VS.
TECHNOLOGY AND MEANING CHANGE

INCREMENTAL AND RADICAL INNOVATION

- Discusses the role of
 - Design Research
 - Human Centered Design (HCD)
- In relation to innovation...
 - *Incremental innovation: **improvements within a given frame** of solutions (i.e., “doing better what we already do”);*
 - *Radical innovation: a **change of frame** (i.e., “doing what we did not do before”).*

DIFFERENCES ILLUSTRATED

- › Incremental innovation is climbing on the same mountain
- › Radical Innovation is moving to a new and unknown mountain



Incremental innovation tries to reach the highest point on the current hill. Radical innovation seeks the highest hill. The implication for design is clear: Because HCD is a form of hill-climbing, it is only suited for incremental innovation.

TECHNOLOGY AND MEANING CHANGE

Technology Change	Yes		Radical Innovation
	No		
		No	Yes
		Meaning Change	

E.g.

- *From Desktop to Notebook Metaphor*
- *From PC to UBI comp*

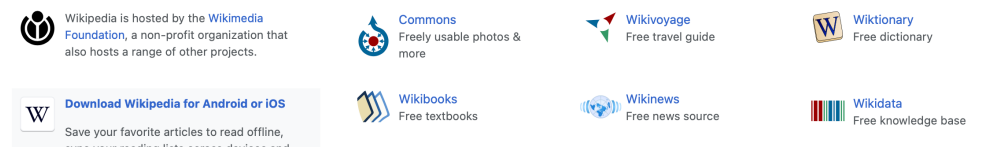
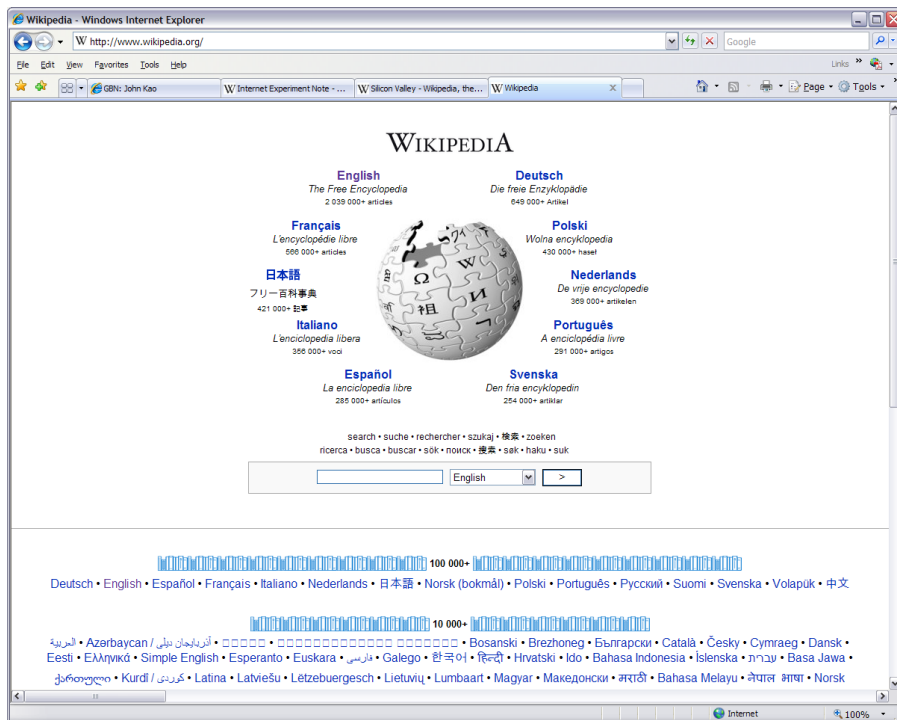
EXAMPLES OF INCREMENTAL INNOVATIONS

BLACK BOARD → BRIGHTSPACE

The screenshot shows the Blackboard LMS interface for user Kaj Grønbæk. The top navigation bar includes 'My Institution', 'Courses', 'Community', 'Content Collection', and 'AU Library'. The main content area is divided into several sections: 'Recently Visited Courses' with links to 'F18 - It produktdesignprojekt', 'F19 - Augmented Reality', 'F20 - It produktdesignprojekt', 'F21 - It produktdesignprojekt', and 'Research Integrity at Aarhus University (CS)'; 'My Announcements' showing a notice for 'F21 - It produktdesignprojekt [520171U027]' with a link to 'Øvelser på torsdag og ugeseddel for U6'; 'Service Info' with a message 'Service is not currently affected.' and 'No planned changes.'; 'My Organisations' with the message 'Currently you are not participating in any organisations.'; 'Intro to Blackboard - ST/HE VIP'; and 'What's New' with a list of items: 'Announcements (5)', 'Assignments (1)', 'Blogs (13)', and 'Courses/Organisations (2)'. A 'Support' section provides instructions and a link to 'English/Danish'.

The screenshot shows the Brightspace LMS interface for user Kaj Grønbæk. The top navigation bar includes 'Home', 'Course Evaluation', 'Discover', 'Quickly Tools', and 'Help'. The main content area features a 'My Courses' section with tabs for 'All', 'Resources', 'Blackboard Courses', and '2022 Feb-Aug'. Below the tabs, there are three course cards: 'It produktdesignprojekt (F22.520171U027.A)' with an end date of 'August 31, 2022 at 11:59 PM' and a notification badge; 'F21 - It produktdesignprojekt [520171U027]'; and 'Research Integrity at Aarhus University (CS)'. A 'View All Courses (3)' link is located below the course cards.

WIKIPEDIA - INCREMENTEL INNOVATION BY THE USERS

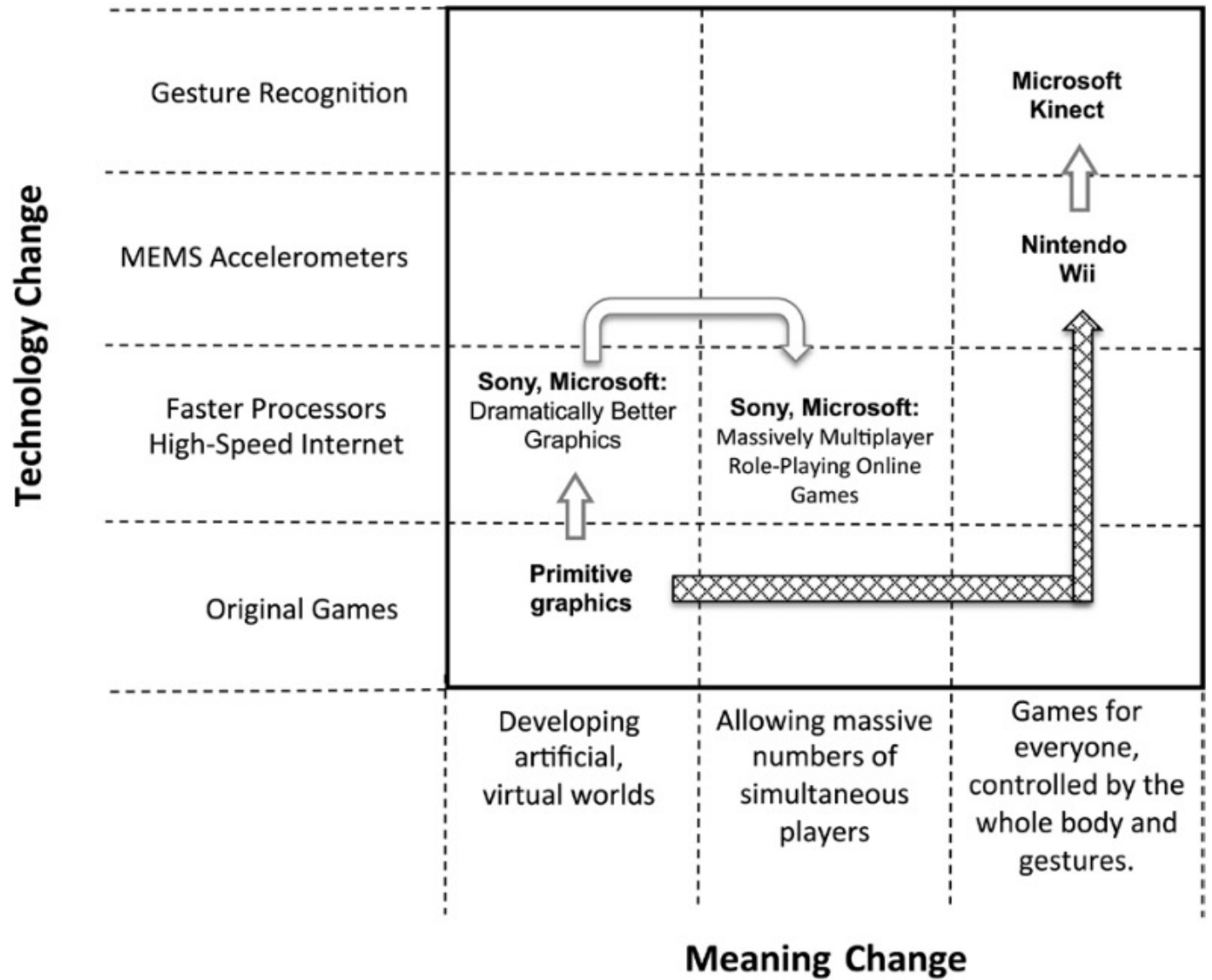


RADICAL INNOVATION

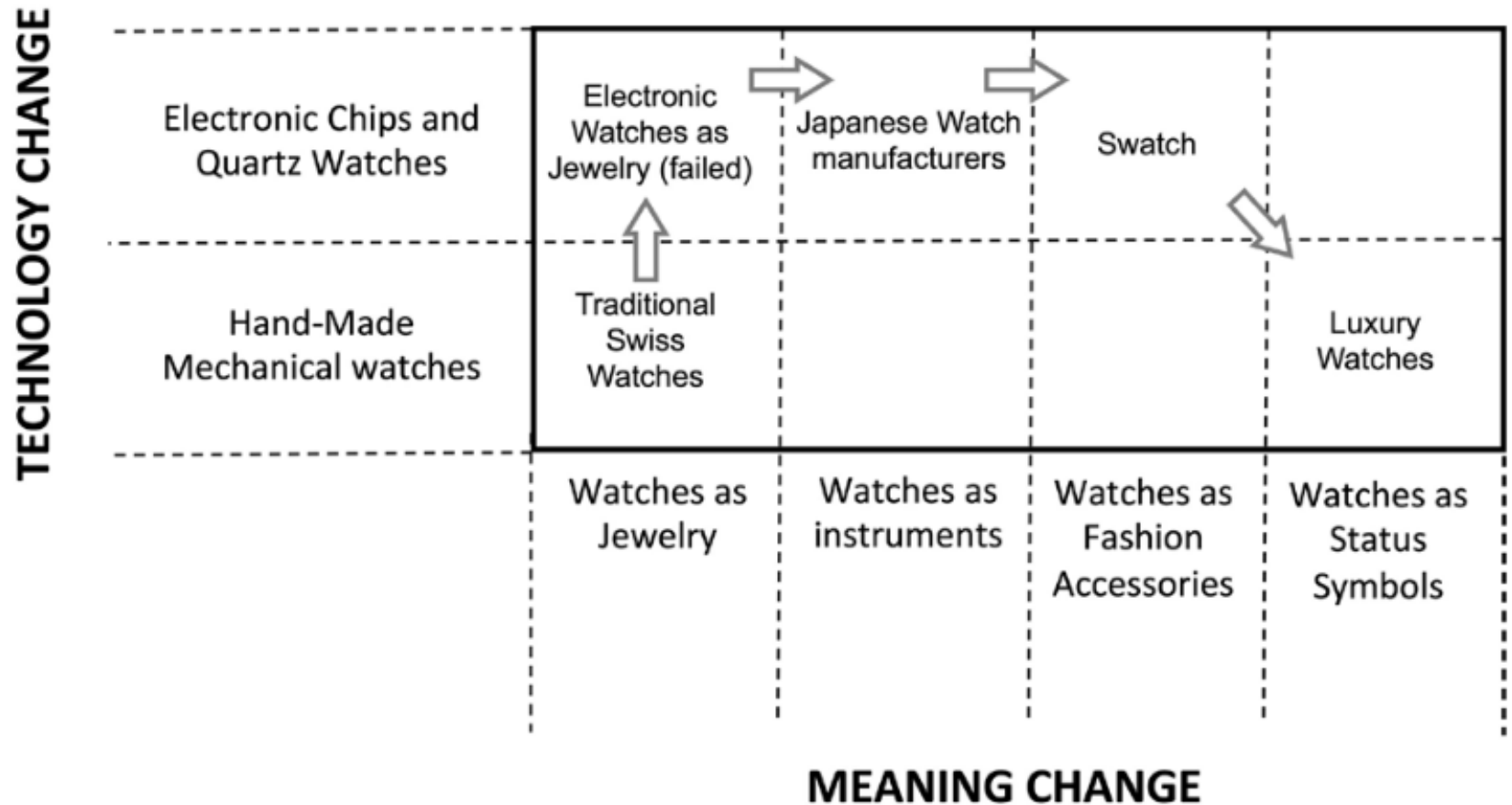
- *Criterion 1:* The invention must be **novel:**
It needs to be dissimilar from prior inventions.
- *Criterion 2:* The invention must be **unique:**
It needs to be dissimilar from current inventions.
- *Criterion 3:* The invention must **be adopted:**
It needs to influence the content of future inventions.

EXAMPLES OF RADICAL INNOVATIONS

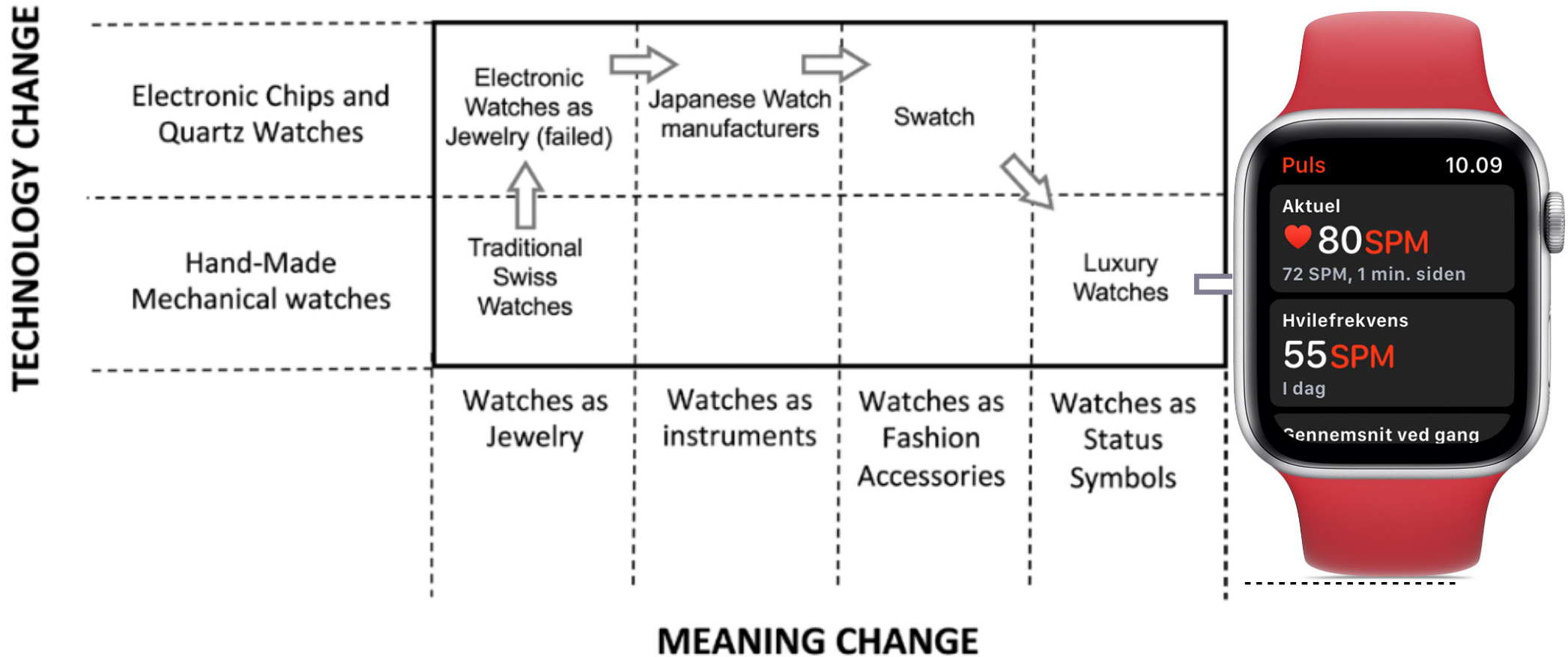
VIDEO GAMING



WRIST WATCHES

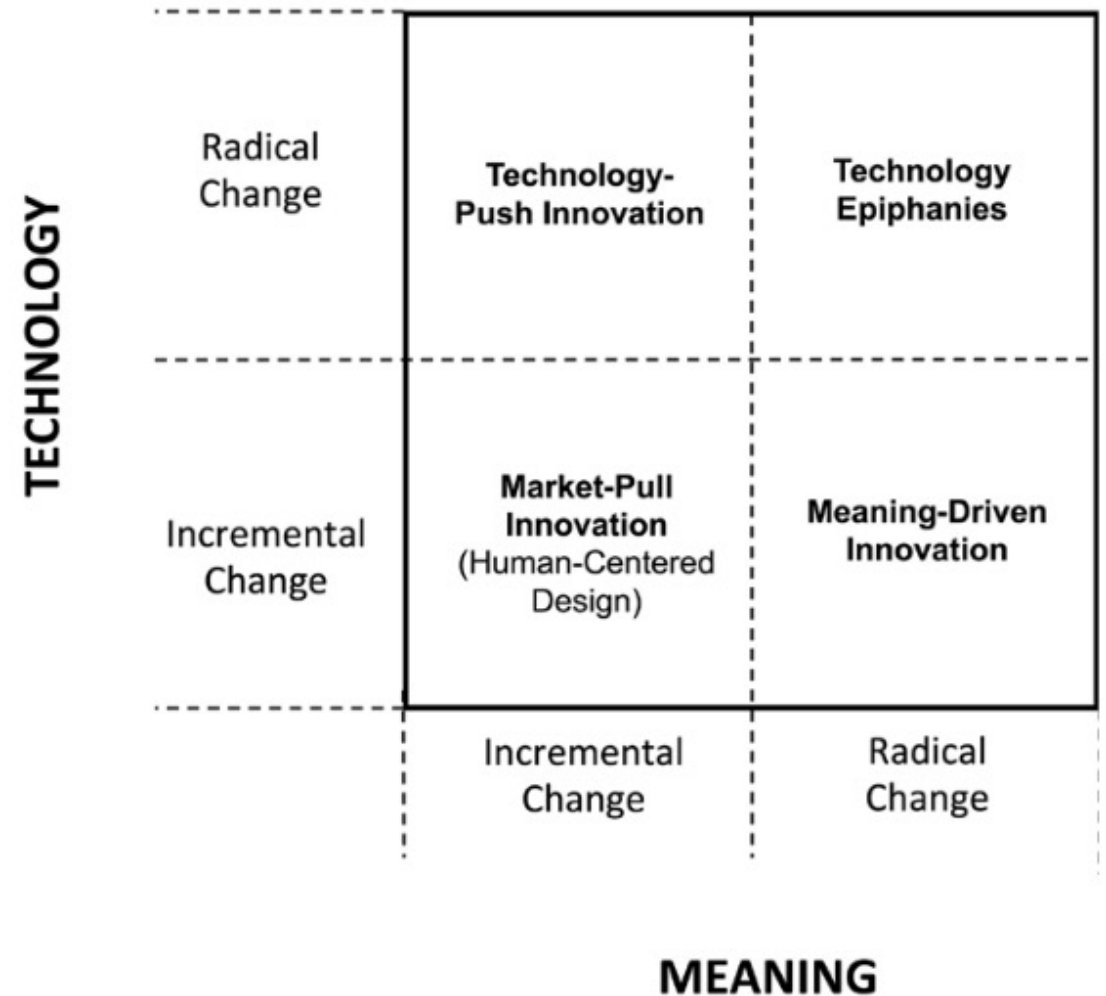


SMARTWATCHES?

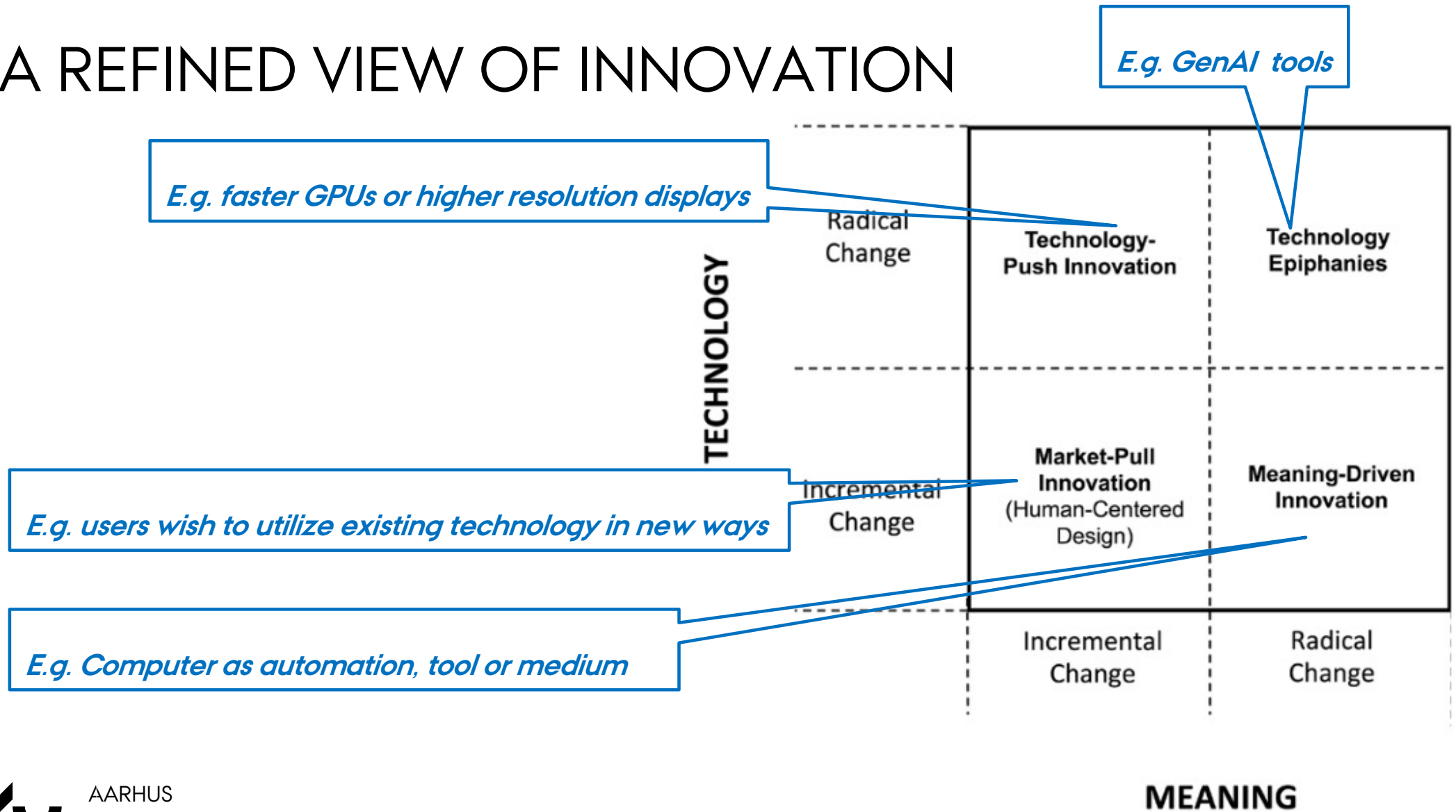


A REFINED VIEW OF INNOVATION

- › Technology Push: Radical changes in technology, but meaning remains the same
- › **Technology Epiphanies** 💡 : Radical change in meaning enabled by new technologies
- › **Meaning Driven**: Radical reframing of the (cultural) meaning without changes in technology
- › Market Pull: Incremental products developed from user needs

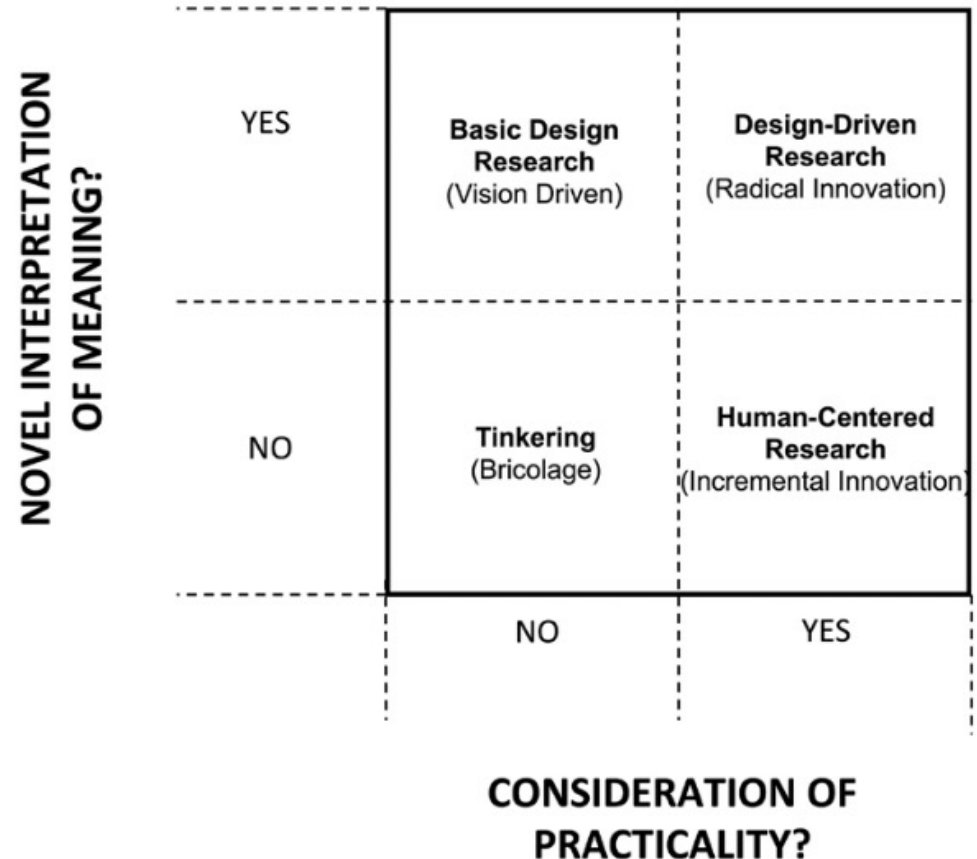


A REFINED VIEW OF INNOVATION



INNOVATION AND DESIGN

- › Basic design: Explore new meanings without a specific product in mind
- › **Design-driven: Envisioning new meanings within a product/domain**
- › Human-centered: Explore and understand existing meanings
- › Tinkering (with technology): (aimlessly) playing with technology





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QUESTIONS ?



TO WHAT DEGREE DO YOUR DESIGN IDEAS HAVE HAVE FOCUS ON:

- › Meaning change
- › Technology change
- › Both?



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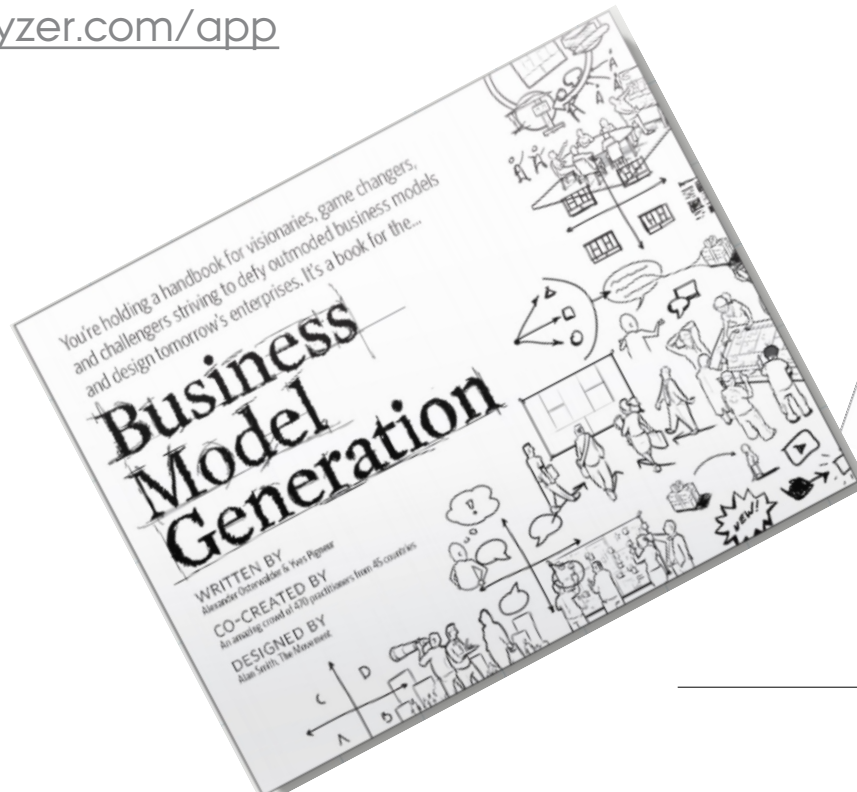
BUSINESS MODELING

Business Model Canvas method

Introduced by Alexander Osterwalder

BUSINESS MODEL CANVAS

- › [Alexander Osterwalder](http://alexosterwalder.com)
- › <http://alexosterwalder.com>
- › <http://www.businessmodelgeneration.com/canvas>
- › <http://www.businessmodelgeneration.com/book>
- › <https://strategyzer.com/app>



Tool for basic business model development












The Business Model Canvas

Designed for:

Designed by:

On:

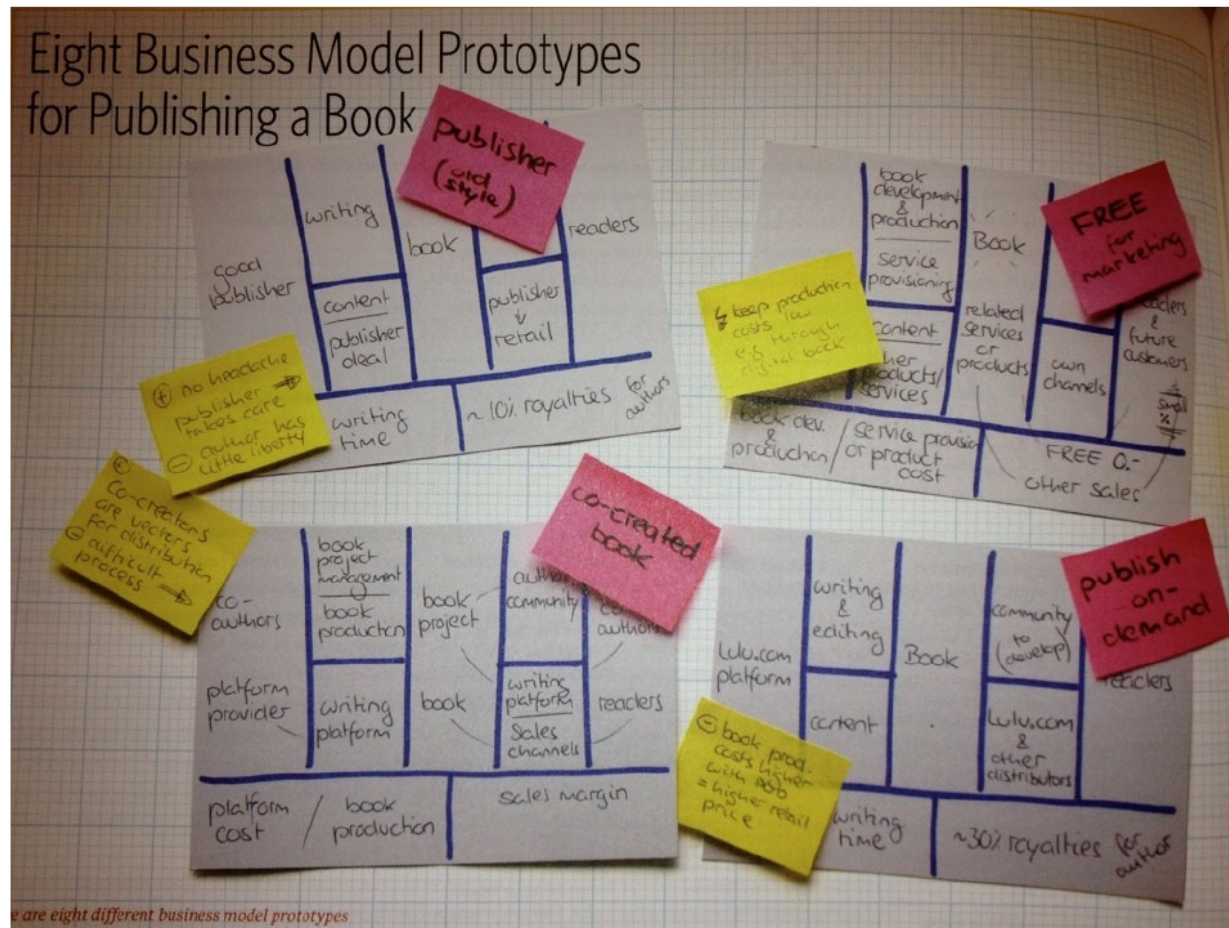
Iteration:

<h3>Key Partners</h3>  <p>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</p> <p><small>Key Partnerships: - reduce risk and uncertainty - acquire resources we cannot get ourselves - increase efficiency</small></p>	<h3>Key Activities</h3>  <p>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Our core streams?</p> <p><small>Key Activities: - production - problem solving - delivery (on site)</small></p>	<h3>Value Propositions</h3>  <p>What value do we deliver to the customer? Which one of our customers' problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</p> <p><small>Value Propositions: - design - performance - reliability - convenience - customisation - cost - risk reduction - access - convenience - consistency - compatibility - connectivity - interoperability</small></p>	<h3>Customer Relationships</h3>  <p>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</p> <p><small>Customer Relationships: - personal assistance - self-service - automated services - community - co-creation - status - convenience</small></p>	<h3>Customer Segments</h3>  <p>For whom are we creating value? Who are our most important customers?</p> <p><small>Customer Segments: - mass - niche - segments - niches - markets - market niches</small></p>
<h3>Key Resources</h3>  <p>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Our core streams?</p> <p><small>Key Resources: - physical - intellectual - financial - human - social (brand, platform, app, etc.) - channels - networks</small></p>				<h3>Channels</h3>  <p>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p> <p><small>Channels: - direct sales - indirect sales - distribution partners - resellers - agents - distributors - retailers - intermediaries - partners - affiliates - franchisees - distributors - agents - distributors - retailers - intermediaries - partners - affiliates - franchisees</small></p>
<h3>Cost Structure</h3>  <p>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</p> <p><small>Cost Structure: - variable costs - fixed costs - semi-variable costs - overheads - salaries - rent - depreciation - amortisation - interest - taxes - insurance - legal fees - marketing - advertising - research and development - infrastructure - maintenance - depreciation - amortisation - interest - taxes - insurance - legal fees - marketing - advertising - research and development - infrastructure - maintenance</small></p>			<h3>Revenue Streams</h3>  <p>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenue?</p> <p><small>Revenue Streams: - asset sale - usage fee - subscription - advertising - commission - brokerage - license - membership - rental - royalty - sales - service - subscription - advertising - commission - brokerage - license - membership - rental - royalty - sales - service</small></p>	

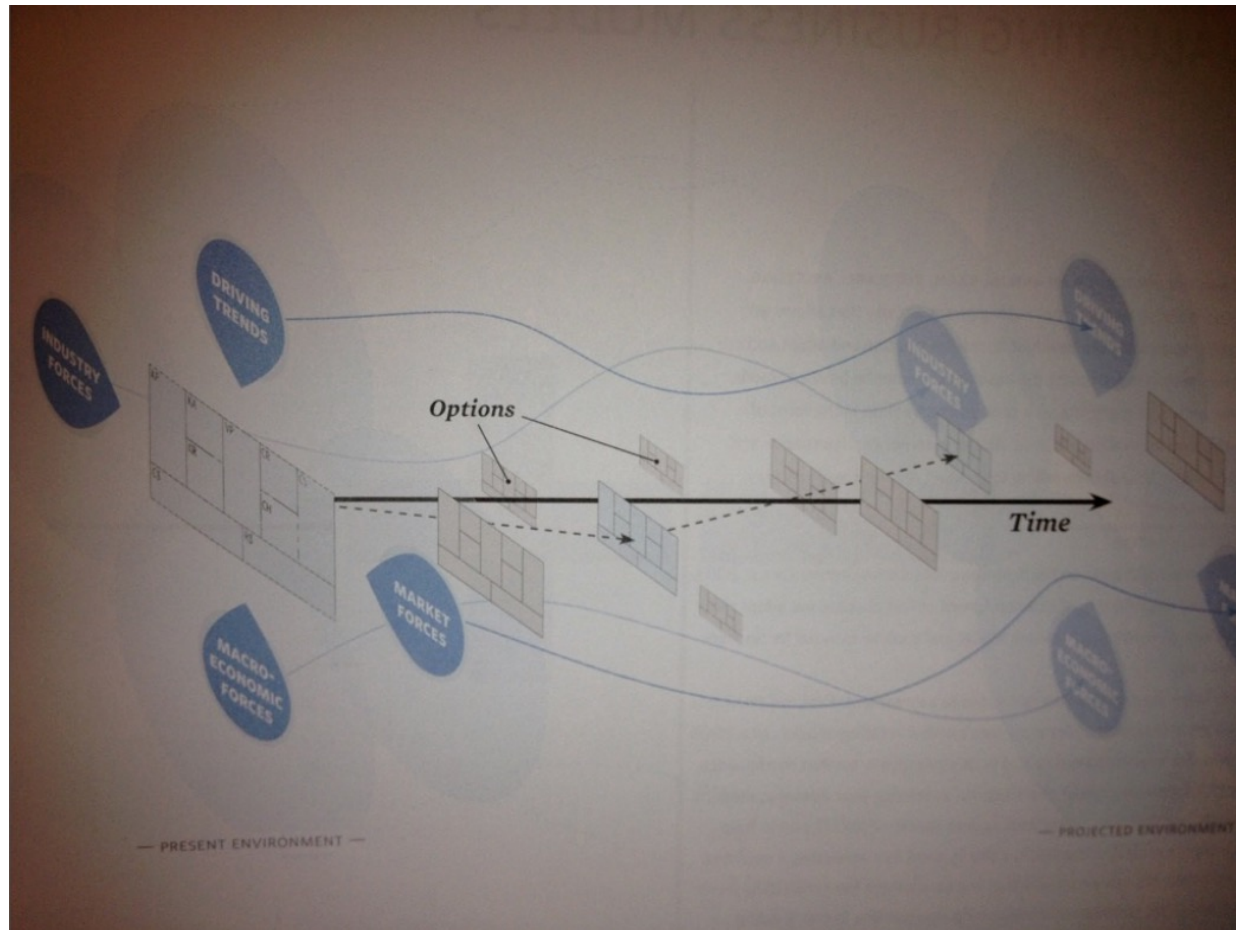
EXAMPLE - ITUNES



MULTIPLE CANVASES FOR SAME TYPE PRODUCT



BMC develops over time



An example – archetypical physical IT-product

Example: Activity Tracker/Fitness Wristband

You've arrived at this product idea – how do you build a business model around it?

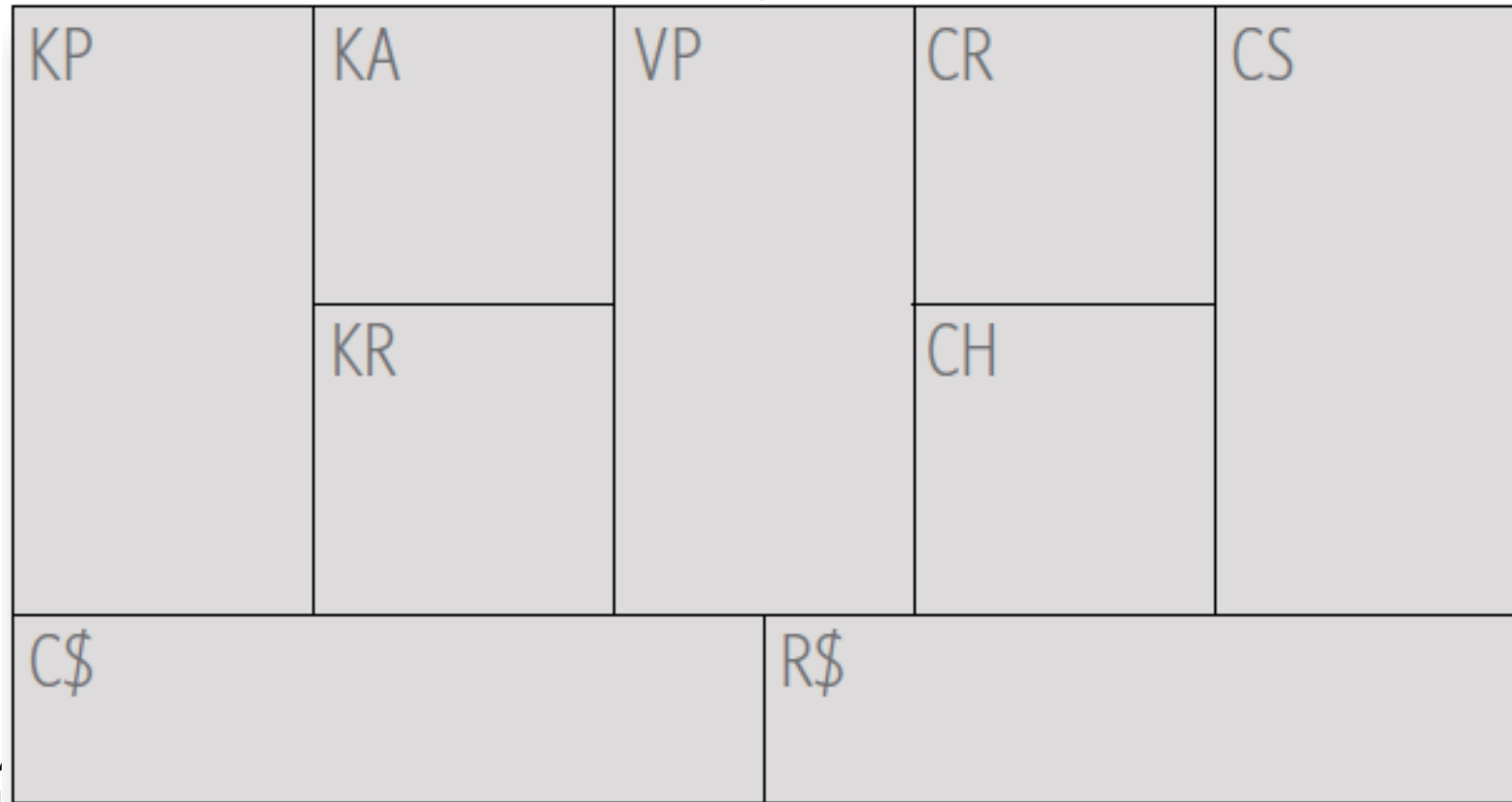


Kaj Grønbæk

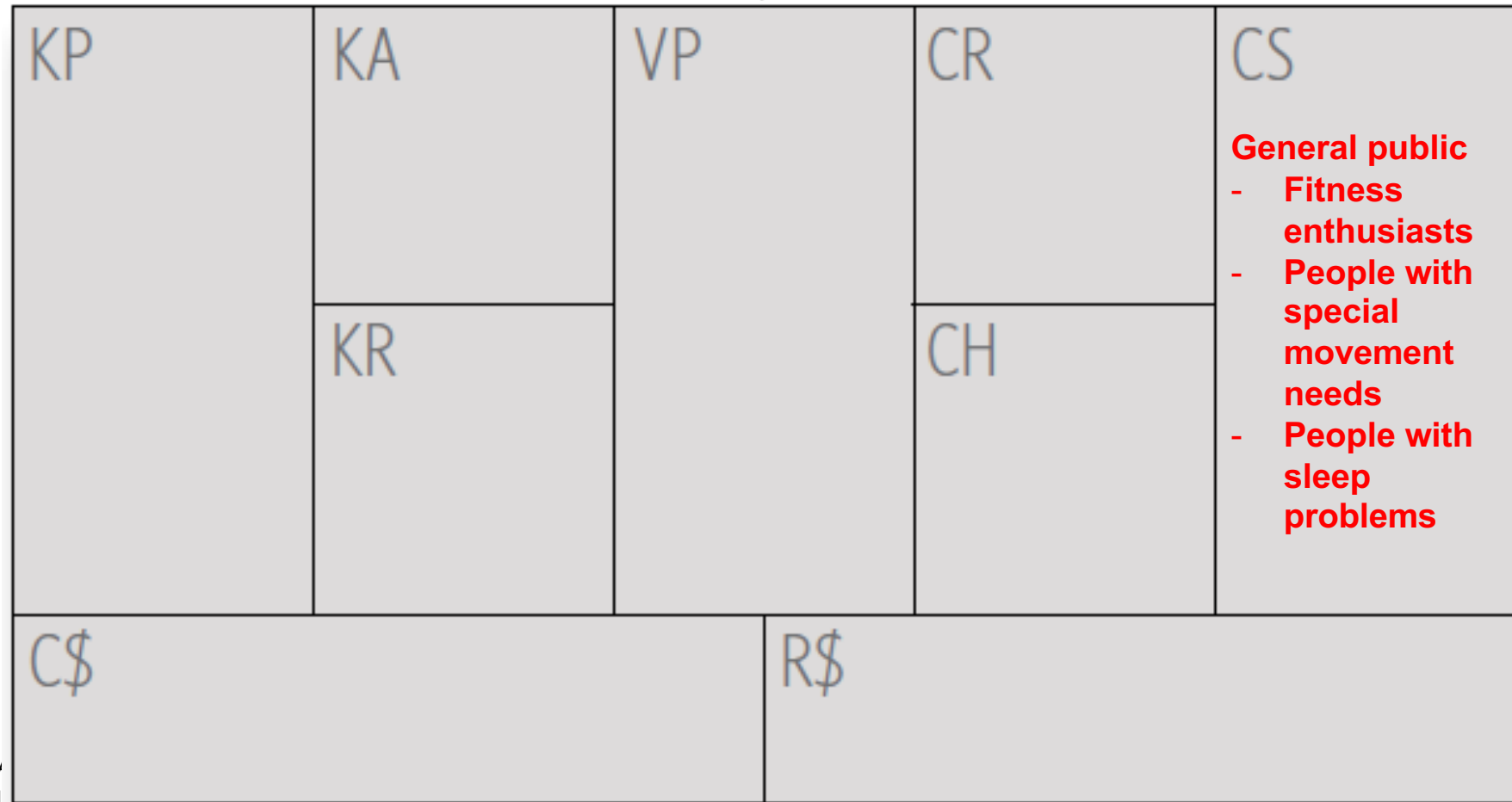
March 2026



ACTIVITY TRACKER CANVAS ?



ACTIVITY TRACKER CANVAS ?





ACTIVITY TRACKER CANVAS ?

KP	KA	VP More movement and better sleep Access to data via all platforms Social fitness community Nudging to more activity and sleep	CR	CS General public <ul style="list-style-type: none">- Fitness enthusiasts- People with special movement needs- People with sleep problems
C\$	KR		CH	

ACTIVITY TRACKER CANVAS ?



KP	KA	VP More movement and better sleep Access to data via all platforms Social fitness community Nudging to more activity and sleep	CR	CS General public - Fitness enthusiasts - People with special movement needs - People with sleep problems
	KR		CH Sold via web shops or physical shops.	
C\$		R\$		



ACTIVITY TRACKER CANVAS ?

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	KR		CH Sold via web shops or physical shops.	
C\$		R\$ Price per sold tracker Accessories sale + upgrades (No subscription)		

ACTIVITY TRACKER CANVAS ?



KP	KA Upgrade physical design Accessories New SW, Apps and services	VP More movement and better sleep Access to data via all platforms Social fitness community Nudging to more activity and sleep	CR Ads Social media Activity data on Web Community	CS General public - Fitness enthusiasts - People with special movement needs - People with sleep problems
	KR		CH Sold via web shops or physical shops.	
C\$			R\$ Price per sold tracker Accessories sale + upgrades (No subscription)	

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KP	KA Upgrade physical design Accessories New SW, Apps and services	VP More movement and better sleep Access to data via all platforms Social fitness community Nudging to more activity and sleep	CR Ads Social media Activity data on Web Community	CS General public - Fitness enthusiasts - People with special movement needs - People with sleep problems
	KR Production facilities SW Services Cloud		CH Sold via web shops or physical shops.	
C\$			R\$ Price per sold tracker Accessories sale + upgrades (No subscription)	



ACTIVITY TRACKER CANVAS ?

<p>KP</p> <p>Manufacturing partner</p> <p>Marketing partner</p> <p>Cloud host</p>	<p>KA</p> <p>Upgrade physical design</p> <p>Accessories</p> <p>New SW, Apps and services</p>	<p>VP</p> <p>More movement and better sleep</p> <p>Access to data via all platforms</p> <p>Social fitness community</p> <p>Nudging to more activity and sleep</p>	<p>CR</p> <p>Ads</p> <p>Social media</p> <p>Activity data on Web</p> <p>Community</p> <p>CH</p> <p>Sold via web shops or physical shops.</p>	<p>CS</p> <p>General public</p> <ul style="list-style-type: none"> - Fitness enthusiasts - People with special movement needs - People with sleep problems
<p>C\$</p>		<p>R\$ Price per sold tracker</p> <p>Accessories sale + upgrades</p> <p>(No subscription)</p>		



ACTIVITY TRACKER CANVAS ?

<p>KP</p> <p>Manufacturing partner</p> <p>Marketing partner</p> <p>Cloud host</p>	<p>KA</p> <p>Upgrade physical design</p> <p>Accessories</p> <p>New SW, Apps and services</p>	<p>VP</p> <p>More movement and better sleep</p> <p>Access to data via all platforms</p> <p>Social fitness community</p> <p>Nudging to more activity and sleep</p>	<p>CR</p> <p>Ads</p> <p>Social media</p> <p>Activity data on Web</p> <p>Community</p> <p>CH</p> <p>Sold via web shops or physical shops.</p>	<p>CS</p> <p>General public</p> <ul style="list-style-type: none"> - Fitness enthusiasts - People with special movement needs - People with sleep problems
<p>CS\$</p> <p>Workforce salaries</p> <p>Production facilities</p> <p>Cloud-hosting</p> <p>Marketing (if not outsourced)</p>		<p>R\$</p> <p>Price per sold tracker</p> <p>Accessories sale + upgrades</p> <p>(No subscription)</p>		



Use BMC for your IT-product ideas!

- › Start with "customer segments"
 - › REMARK: Customer and User are not necessarily the same group of people
- › Focus on "value proposition"
- › And move on to Revenue stream
 - › REMARK : Many IT-products do have a "free" element,
 - › It is important to consider if the value proposition holds for all the Revenue streams assumed...
- › The other fields follows naturally from the start fields ...



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