WHAT ARE PRODUCT, WHY SHOULD I CARE? WHAT IS DISRUPTIVE INNOVATIONS (EEMT 5260)

Prof. Richard H.Y. So

(E-mail: rhyso   Tel: 2358 6961)

Tue 7:30pm – 10:20pm
(Rm 2464)

Aims:

- To set the scope and definitions for the course
- An overview of the course
- Assignment One (Due next Tuesday 14 Feb)
- Disruptive Innovations

Take Home Messages::

- Products include Services; Financial Products; Apps and Products
- Important information will be repeated multiple times via lectures, assignments, fire side chats and references
- Active Participation will be rewarded
- Disruptive Innovations have strict definitions
- Disruptive Innovations are more than progressive innovations
- Disruptive Innovations require BOTH business opportunities and forecasted technology break-throught

CONTENTS

1.0 Products & Services
>   **1.1 Name the most Cool product**
>   **1.2 Name the most Cool service**
>   **1.3 Name the most Cool system**
>   **1.4 Name the most successful business**
>   **1.5 Name the most successful entrepreneur**

2.0 Learning from the experienced
>   **2.1 Who wrote the references?**
>   **2.2 Who am I?**
>   **2.3 Who are you?**

3.0 Learning by doing (the painting paradigm)
>   **3.1 Course grading**
>   **3.2 The syllabus**
>   **3.3 Fire side chat**

CONTENTS

1.0 Products & Services

      1.1 Name the most Cool product
      1.2 Name the most Cool service
      1.3 Name the most Cool system
      1.4 Name the most successful business
      1.5 Name the most successful entrepreneur

What do you think "products" should include?
Common and differences:

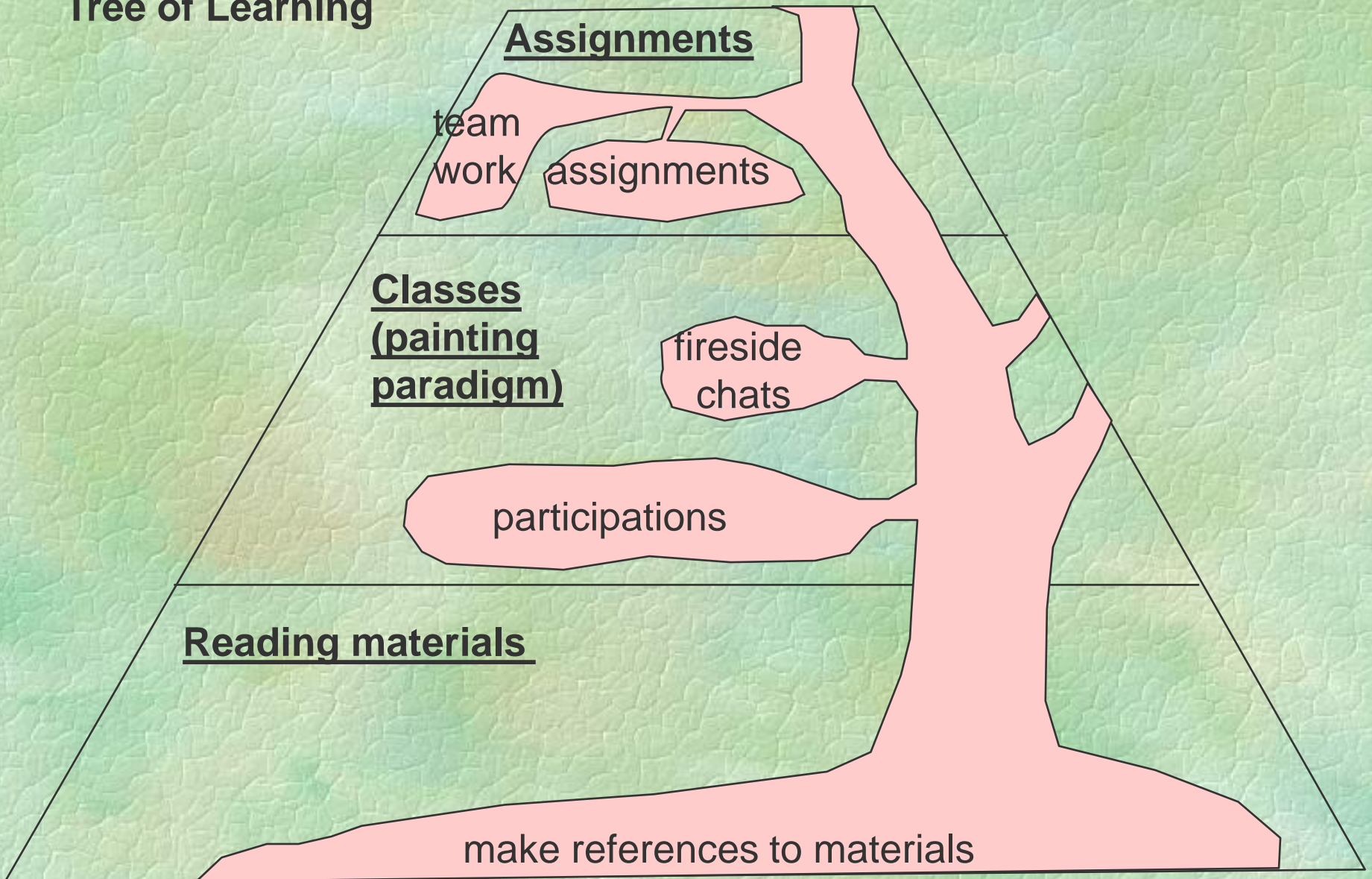|	Hardware	Software	Finance	Others?
Common				
Differences				

Take home message:

In this course, the "Product" in the course title includes BOTH products and services.

Why are you taking this course?
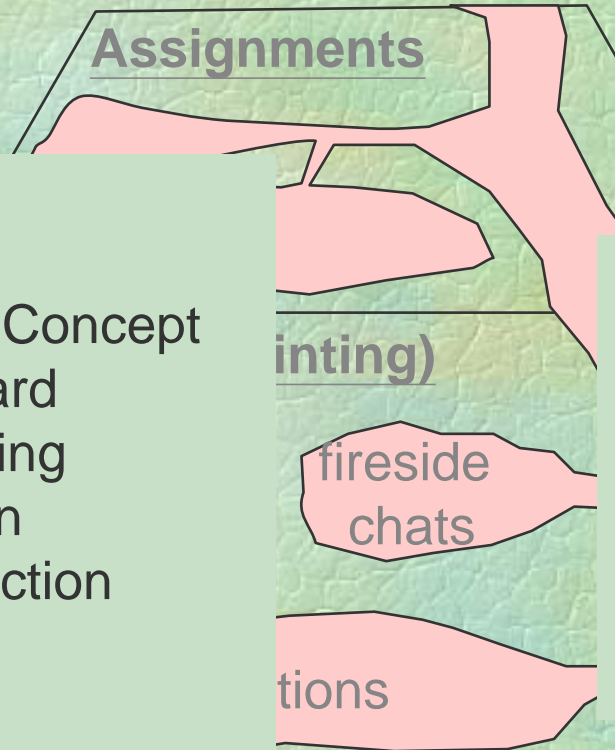
What is your background?

Tree of Learning

Assignments

team
work   assignments

Classes
(painting
paradigm)

fireside
chats

participations

Reading materials

make references to materials

8

12 weeks later ….

Tree of Learning

Assignments

- L1: Intro+Disruptive
- L2: Value+ESG
- L3: Design1: Needs-to-Concept
- L4: Design2a: Storyboard
- L5: Design2b: Prototyping
- L6: Design3: Production
- L7: IP branding & protection
- L8: Don Normon
- L9: Contextual Design
- L10: Finance $ & Startup
- L11: Nam Suh (Axiomatic Design)
- L12 Scott Hurff (Apps)

(inting)

fireside chats

tions

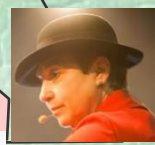materials

- Winnie Wai (Design)
- Simon Law (Sino Land)
- Sigurd Berg (IP/Brand)
- 艾永亮 (Business Consultant)
- Calvin (IoT solutions)
- Zhanwei (one-stop service)
- Stephen & Jacky (Kerry Logistics)
- Jensen Fong (Kick starter)

pwc

Scott

Nam

Clayton Christensen

Mark Bonchek

Cara France

Steve Jobs

Karl Ulrich

Steven Eppinger

e material

Mike Baxter

Scott McCloud

Don

Hugh

Karen

0
10

2.0 Learning from the experienced
2.1 Who wrote the references?

1. Clayton M. Christensen, Michael E. Raynor, and Rory McDonald (2015) What is Disruptive Innovation?
2. Bonchek, M. and France, C. (2016) Build Your Brand as a Relationship.
3. Gallo, C. (2011) The innovation secrets of Steve Jobs: insanely different principles for breakthrough success.
4. Osterwalder, A. and Pigneur, Y. (2014). Value Proposition Design: How to Create Products and Services Customers Want (Strategyzer).
5. Beyer, H. and Holtzblatt, K. (2016) Contextual Design: design for life.
6. Norman, D. (2013). The Design of Everyday Things: Revised and Expanded Edition.
7. Hurff, S. (2016). Designing Products People Love: How Great Designers Create Successful Products.
8. Farid, A.M. and Suh, N.P. (2016) Axiomatic Design in Large Systems, Complex Products, Buildings and Manufacturing Systems

…… plus ….

9.   Ulrich, K.T. and Eppinger, S.D. (1995) Product Design and Development
10. Baxter, M. (1995) Product Design (p.79-99)
11. Scott McCloud (1994) Understanding Comics: The invisible ART.
12. PWC (2022) the-importance-of-esg-measurement.
13. Zeng, M. (2018) Everything Alibaba Does Differently and Better.
14. Pearlstine, N., Pierson, D., Dixon, R., Cloud, D.S., Su, A. and Lu, M.H. (2019) Who is the man behind Huawei and why is the U.S. intelligence community so afraid of his company - Los Angeles Times

…. More

Before walking through the reading materials..
Even the best of the best can fail

https://www.theguardian.com/science/2021/apr/02/spacewatch-another-failed-test-landing-spacex-starship

https://www.reuters.com/business/autos-transportation/tesla-recalls-nearly-54000-us-vehicles-rolling-stop-software-feature-2022-02-01/

https://www.theverge.com/2022/9/29/23378713/google-stadia-shutting-down-game-streaming-january-2023

https://www.motorsafety.org/2023/01/#:~:text=Daimler%20recalls%20Mercedes%2DBenz%20cars%20with%20fly%2Daway%20sunroofs%EF%BF%BC&text=Jacksonville%2C%20FL%20%E2%80%93%20January%2022022%2C,the%20risk%20of%20a%20crash.

Take Home Message:
Keep trying! And every reported mistake is an opportunity to learn
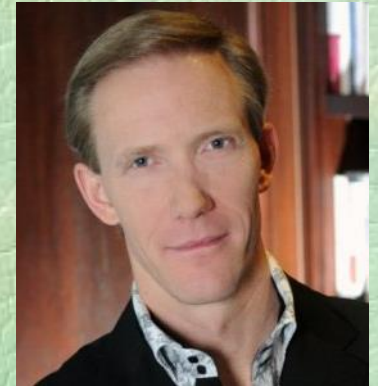
2.0 Learning from the experienced
2.1 Who wrote the references / reference materials?

1. Clayton M. Christensen, Michael E. Raynor, and Rory McDonald (2015) What is Disruptive Innovation? Harvard Business Review

Late Clayton M. Christensen was the
Kim B. Clark Professor of Business
Administration at Harvard
Business School

Michael E. Raynor is a director at Deloitte Consulting LLP.
He is the coauthor, with Mumtaz Ahmed, of The Three
Rules: How Exceptional Companies Think (New York:
Penguin Books, 2013).

Rory McDonald is the Thai-Hi T. Lee (MBA 1985)
Associate Professor of Business Administration in the
Technology and Operations Management unit at
Harvard Business School. In 2020, HBR article, "When
It's Time to Pivot, What's Your Story?"

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1. Clayton M. Christensen, Michael E. Raynor, and Rory McDonald (2015) What is Disruptive Innovation? Harvard Business Review

Take home messages:

a)   Disruptive or non-disruptive is not measured by success
b)   It makes sense to adhere to the theory
c)   To be a successful disruptor takes time
d)   Potential disruptor(s) can be spotted and destroyed
e)   Uber, iPhone and Tesla motor will be discussed in this context

Quotation (Clayton et al., 2015)

"Incumbents outperformed entrants in a sustaining innovation context but underperformed in a disruptive innovation context."

2. Bonchek, M. and France, C. (2016) Build Your Brand as a Relationship. Harvard Business Review.

Mark Bonchek is the Founder and CEO (Chief Epiphany Officer) of Shift Thinking. He works with leaders and organizations to update their thinking for a digital age. Sign up for the Shift newsletter and follow Mark on Twitter at @MarkBonchek.

dictionary.cambridge.org:
Epiphany: a moment when you suddenly feel that you understand, or suddenly become conscious of, something that is very important to you

Cara France is CEO of The Sage Group, a firm providing marketing and consulting talent to San Francisco Bay area companies, and founder of Marketers that Matter. Follow her on Twitter @SageCEO..

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2. Bonchek, M. and France, C. (2016) Build Your Brand as a Relationship. Harvard Business Review.

Take home messages:

a) History of Branding: from 'features' to 'idea' to 'experience'
b) Building a relationship is more than just change of names
c) Don't stop at Reverse Marketing …

Have you heard of "Flipped Classroom" ?
Have you heard of "Blended Learning" ?

Quotation (Bonachek ayton et al., 2015)

"In the past, brands were objects or concepts. You had a relationship with a brand. But in this social age, brands are the relationships."

2b. Biemans, W.G. and Brand, M.J. (1995) Reverse Marketing: A Synergy of Purchasing and Relationship Marketing. International Journal of Purchasing and Materials Management; Summer 1995; 31 (3); 29 Business Premium Collection

https://library.ust.hk/

Wim G. Biemans is an Associate Professor of Marketing at the University of Groningen in the Netherlands. He has published widely on interorganizational collaboration in product development. Current research projects involve the management of new product announcements, dual marketing, and the implementation of market oriented product development.

Maryse J. Brand is an Assistant Professor of Marketing at the University of Groningen in the Netherlands. She holds a PhD degree in marketing. Her research interests include industrial marketing, organizational buying behavior, prchasing, and industrial marketing research.

18

3. Gallo, C. (2011) The innovation secrets of Steve Jobs: insanely different principles for breakthrough success.

"Apple changed the world with the Mac and hasn't stopped innovating since. Carmine Gallo reveals the secrets and gives you the tools to unleash your inner Steve."
—MARC BENIOFF, chairman and CEO of salesforce.com and author of the national bestseller *Behind the Cloud*

The Innovation Secrets of STEVE JOBS

INSANELY DIFFERENT Principles for Breakthrough Success

CARMINE GALLO
Bestselling author of
THE PRESENTATION SECRETS OF STEVE JOBS
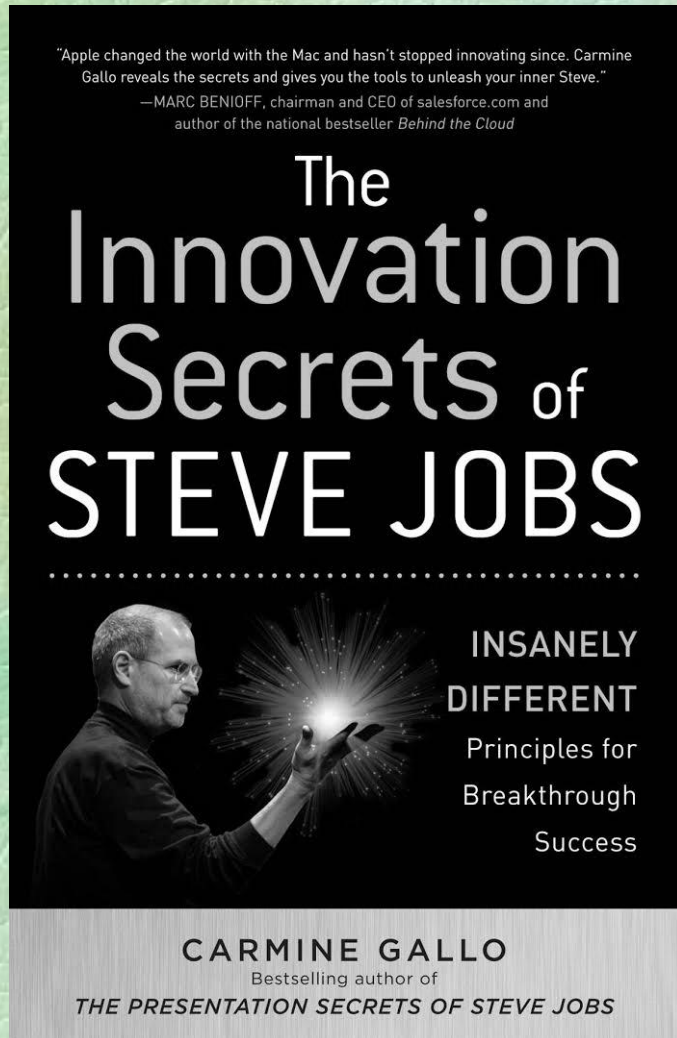
Carmine Gallo - KEYNOTE SPEAKER – BESTSELLING AUTHOR – CEO ADVISOR – HARVARD INSTRUCTOR

$9,995
In 1983

What is this product?

1955 - 2011

19

3. Gallo, C. (2011) The innovation secrets of Steve Jobs: insanely different principles for breakthrough success.

These are the Seven Principles of Innovation, inspired by the master himself:
1.   Do What You Love: Think differently about your career.
2.   Put a Dent in the Universe: Think differently about your vision.
3.   Kick Start Your Brain: Think differently about how you think.
4.   Sell Dreams, Not Products: Think differently about your customers.
5.   Say No to 1,000 Things: Think differently about design.
6.   Create Insanely Great Experiences: Think differently about your brand experience.
7.   Master the Message: Think differently about your story.

Quotation (Steve Jobs)
"Sometimes when you innovate, you make mistakes. It is best to admit them quickly, and get on with improving your other innovations."

3. Gallo, C. (2011) The innovation secrets of Steve Jobs: insanely different principles for breakthrough success.

Take home messages:

a)   Design is of utmost importance
b)   Design teams are kept away from day-to-day work
c)   Well documented and reviewed by top management
d)   Separate teams on product realization
e)   Iteration through its manufacturing process
f)   Product launch is planned

Quotation (Steve Jobs)
"I'm convinced that about half of what separates successful entrepreneurs from the non-successful ones is pure perseverance."

4. Osterwalder, A. and Pigneur, Y. (2014). Value Proposition Design: How to Create Products and Services Customers Want (Strategyzer).

https://library.ust.hk/

Dr. Alexander (Alex) Osterwalder is one of the world's most influential strategy and innovation experts, a leading author, entrepreneur, and in-demand speaker whose work has changed the way established companies do business and how new ventures get started.

Yves is a professor at the University of Lausanne since 1984, and has held visiting professorships at Georgia State University, University of British Columbia, National University of Singapore, and HEC Montreal. Together with Alex Osterwalder, he invented the Business Model Canvas and co-authored the international bestselling books "Business Model Generation" and "Value Proposition Design". Yves and Alex are ranked No. 4 among the "Thinkers50's Most Influential Management Thinkers" in the world and hold the Thinkers50 Strategy Award.

4. Osterwalder, A. and Pigneur, Y. (2014). Value Proposition Design: How to Create Products and Services Customers Want (Strategyzer).
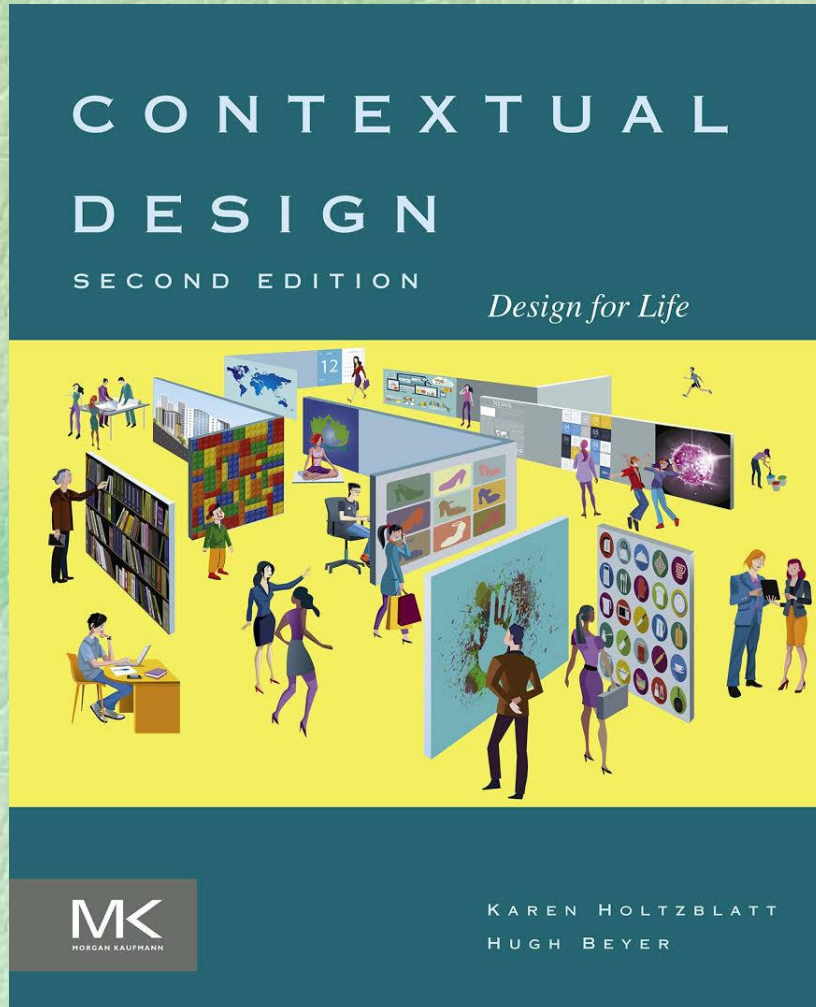
Take home messages:
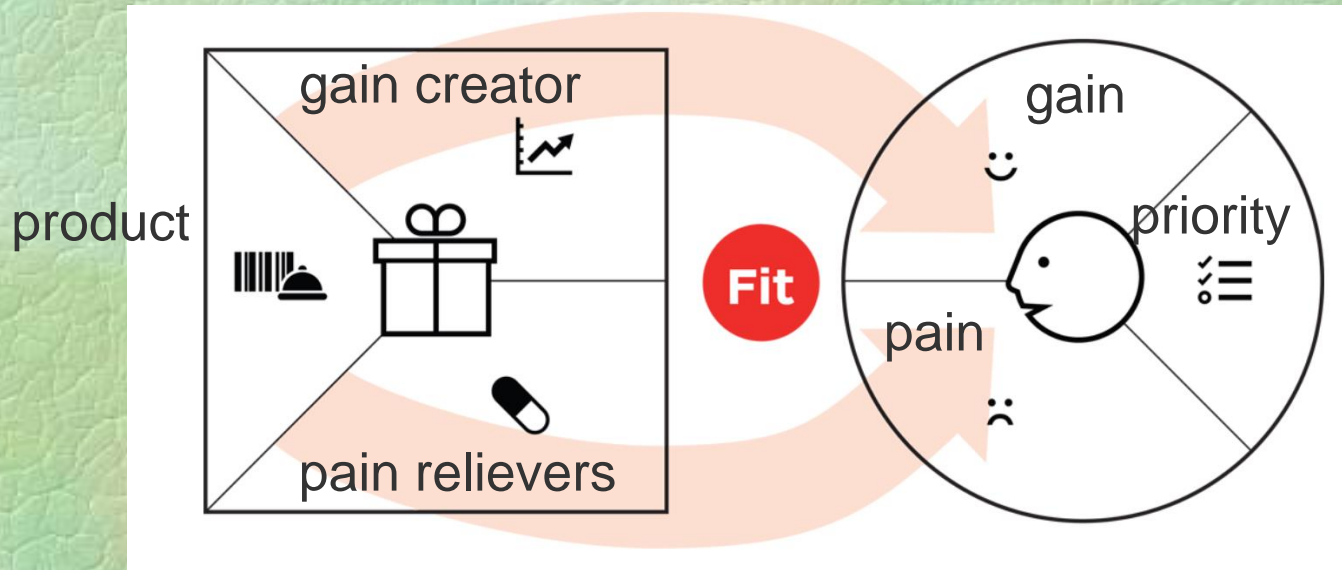
His Business Model **CANVAS** is used by P&G, Amazon, Tesla

Quotation (Osterwalder and Pigneur (2014)
" Understanding the customer's perspective is crucial to designing great value propositions."

5. Beyer, H. and Holtzblatt, K. (2016) Contextual Design: design for life.

https://library.ust.hk/

CONTEXTUAL DESIGN

SECOND EDITION

Design for Life

KAREN HOLTZBLATT

HUGH BEYER

Hugh Beyer is co-founder and CTO of InContext Design, a user-centered design firm using Contextual Design's world-renowned user-centered techniques to deliver data and design solutions with client teams across multiple industries.
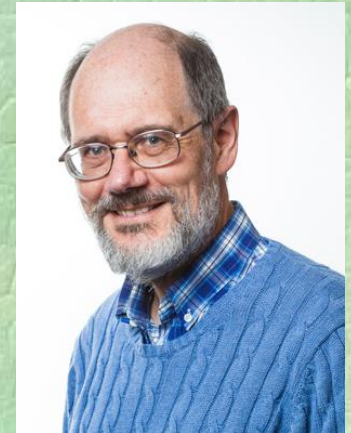
Karen Holtzblatt is an American computer scientist known for her contributions in human–computer interaction, and particularly in contextual design. She founded InContext Design in 1992, and is its CEO. Holtzblatt was elected to the CHI Academy in 2007 and won the inaugural ACM SIGCHI Lifetime Award for Practice in 2010. Holzblatt is also affiliated with the University of Maryland, as a research scientist in the Human-Computer Interaction Lab and iSchool.

5. Beyer, H. and Holtzblatt, K. (2016) Contextual Design: design for life.

Take home messages:

a)   Customers cannot tell what they want in full
b)   Observation is the key to uncover vital fine details
c)   You cannot show a product out of its context

At GM, we are committed to putting the customer at the center of everything we do. By better understanding our customers, Contextual Design helps us drive innovation and design for their needs today.

—Mike Hichme *Director, Vehicle User Interface, GM*

6. Norman, D. (2013). The Design of Everyday Things: Revised and Expanded Edition.
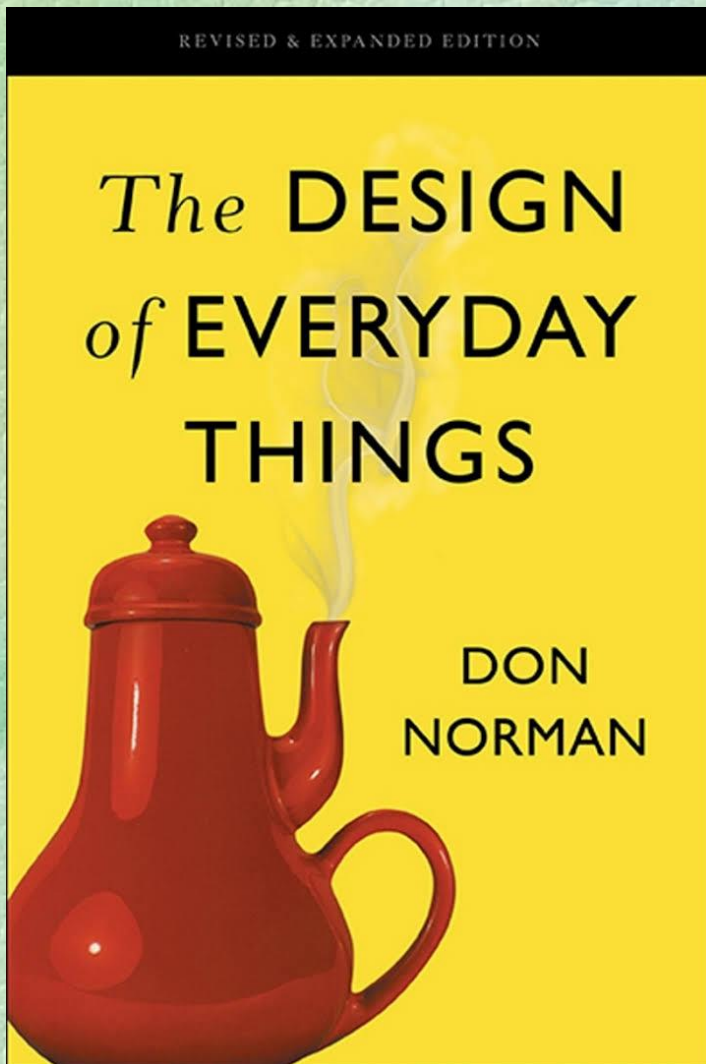
Donald Arthur Norman (born December 25, 1935) is an American researcher, professor, and author. Norman is the director of The Design Lab at University of California, San Diego. He is best known for his books on design, especially The Design of Everyday Things. He is widely regarded for his expertise in the fields of design, usability engineering, and cognitive science. He is a co-founder and consultant with the Nielsen Norman Group. He is also an IDEO fellow and a member of the Board of Trustees of IIT Institute of Design in Chicago. He also holds the title of Professor Emeritus of Cognitive Science at the University of California, San Diego. Norman is an active Distinguished Visiting Professor at the Korea Advanced Institute of Science and Technology (KAIST), where he spends two months a year teaching.

6. Norman, D. (2013). The Design of Everyday Things: Revised and Expanded Edition.

Take home messages:

a) To Err is human
b) Human Error? No, bad design

"Design is really an act of communication, which means having a deep understanding of the person with whom the designer is communicating."

— **Donald A. Norman, <u>The Design of Everyday Things</u>**

https://90percentofeverything.com/2010/06/08/design-thinking-is-a-nonsensical-phrase-that-deserves-to-die-%E2%80%93-don-norman/index.html

7. Hurff, S. (2016). Designing Products People Love: How Great Designers Create Successful Products.

Scott Hurff is a product designer and author. He's led the design of several highly successful consumer products, ranging from ecommerce to video sharing to dating, at pre-IPO companies and venture-backed startups (Tinder). He's also bootstrapped products of his own. Scott can be found at scotthurff.com.

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7. Hurff, S. (2016). Designing Products People Love: How Great Designers Create Successful Products.

Take home messages:

Find audience
Find pain
Find product
(Hunt
Synthesize)
Product improved by feedback
Fidelity increases
Launch

My goal is to show you how to create successful digital products, regardless of the industry in which you operate.
- Scott Hurff

8. Farid, A.M. and Suh, N.P. (2016) Axiomatic Design in Large Systems, Complex Products, Buildings and Manufacturing Systems

Amro M. Farid · Nam P. Suh *Editors*

Axiomatic Design in Large Systems

Complex Products, Buildings and Manufacturing Systems
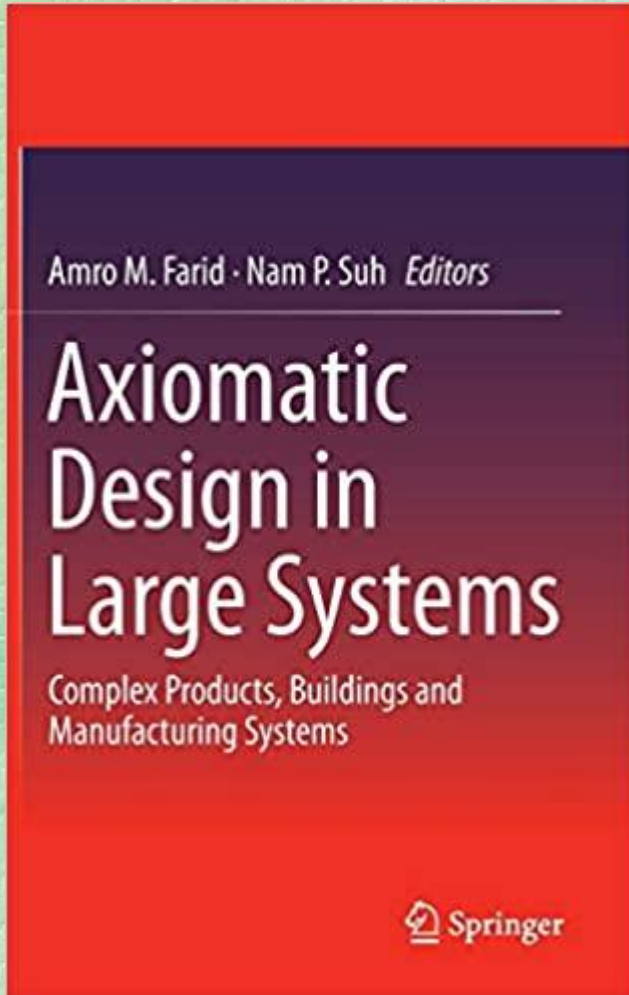
Professor Amro M. Farid graduated from MIT and obtained his PhD from University of Cambridge. He is currently an Associate Professor of Engineering at the Thayer school of Engineering at Dartmouth.

Prof. Nam Suh was the 13th and 14th President of KAIST. Before that, he has spent most of his professional career at MIT, where he was the Director of the Park Center for Complex Systems, and the Head of the Department of Mechanical Engineering, MIT.

8. Farid, A.M. and Suh, N.P. (2016) Axiomatic Design in Large Systems, Complex Products, Buildings and Manufacturing Systems

Take home messages:
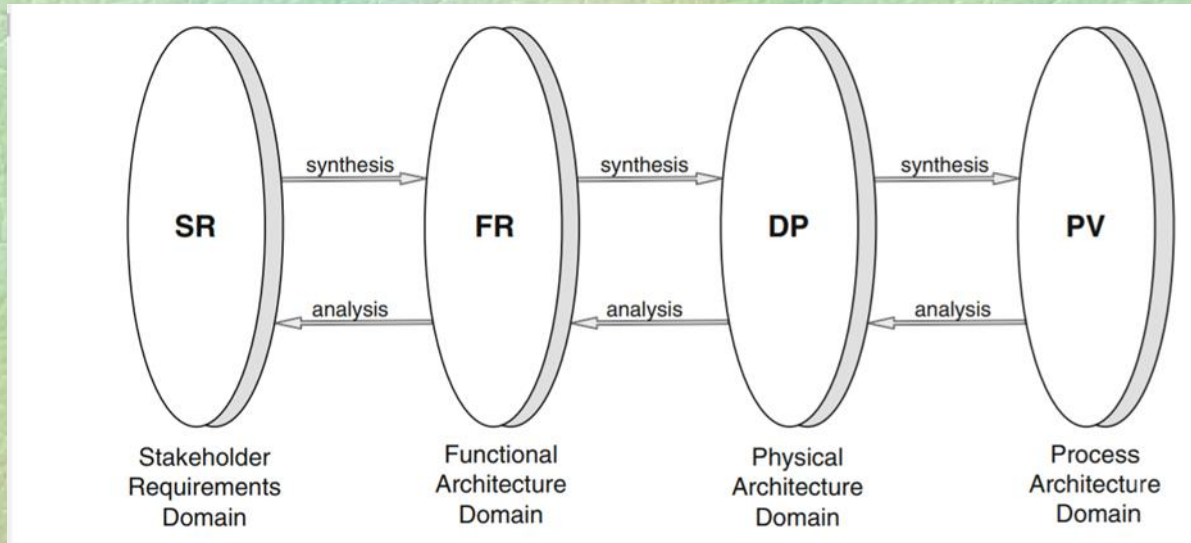
Axiom: Self-evident truth or fundamental truth for which there is no counter examples or exceptions. It cannot be derived from other laws of nature or principles.

9.0 Ulrich, K.T. and Eppinger, S.D. (1995) Product Design and Development

Prof. Karl T. Ulrich is Vice Dean of Entrepreneurship and Innovation and the CIBC Professor of Entrepreneurship and e-Commerce at the Wharton School of the University of Pennsylvania. Before that, he was Associate Professor at MIT Sloan School of Management.

Prof. Steven D. Eppinger is the General Motors Leaders for Global Operations Professor, a Professor of Management Science and Engineering Systems, and the Co-Director of the System Design and Management Program at the MIT Sloan School of Management.

9.0 Ulrich, K.T. and Eppinger, S.D. (1995) Product Design and Development

Product Design and Development

Karl T. Ulrich
Steven D. Eppinger

1.0 INTRODUCTION
2.0 DEVELOPMENT PROCESSES AND ORGANIZATION
3.0 IDENTIFYING CUSTOMER NEEDS
4.0 ESTABLISHING PRODUCT SPECIFICATIONS
5.0 CONCEPT GENERATION
6.0 CONCEPT SELECTION
7.0 PRODUCT ARCHITECTURE
8.0 INDUSTRIAL DESIGN
9.0 DESIGN AND MANUFACTURING
10.0 EFFECTIVE PROTOTYPING
11.0 ECONOMICS OF PRODUCT DEVELOPMENT PROJECTS
12.0 MANAGING PRODUCT DEVELOPMENT PROJECTS

9.0 Ulrich, K.T. and Eppinger, S.D. (1995) Product Design and Development

Take home messages:

a) Don't fix what is not broken – the good old basics (e.g., the BOM forms)
b) But … manufacturing is an expensive investment (learn from Apple)

"Product development is like sailing: proficiency is gained through practice but some theory of how sails work and some instruction in the mechanics (and even tricks) of operating the boast help tremendously."

— Karl Ulrich and Steven Eppinger (1995)

10. Baxter, M. (1995) Product Design (p.79-99)
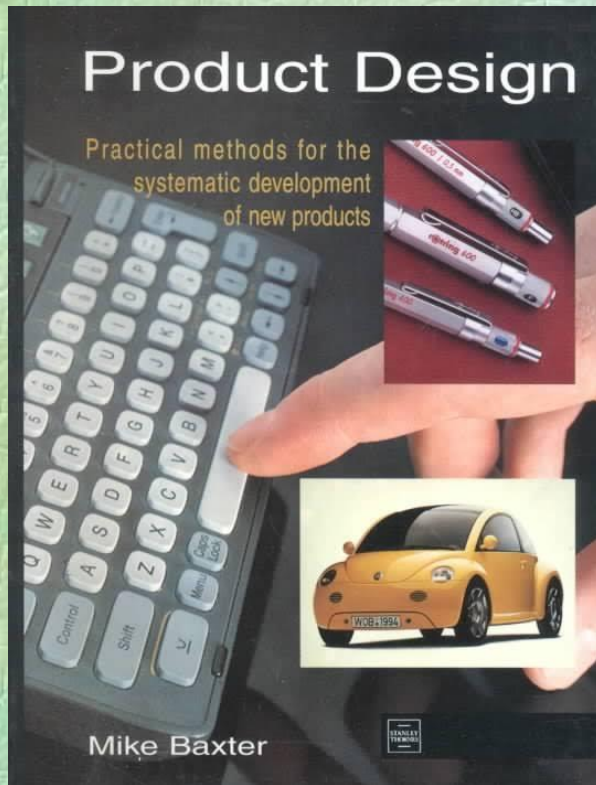
Prof. Mike Baxter was Professor and Dean of Ravensbourne University and Director of the Design Research Centre at Brunel University (UK). He established his first consultancy business in 2001, and has been an independent researcher, author, keynote speaker and business consultant for some of the world's biggest brands (Cisco, Google, Skype, Sony PlayStation, HSBC and Roche etc.)..

10. Baxter, M. (1995) Product Design (p.79-99)

1.0 INTRODUCTION
2.0 PRINCIPLES OF NEW CONCEPT
3.0 THE PRINCIPLES OF PRODUCT STYLING
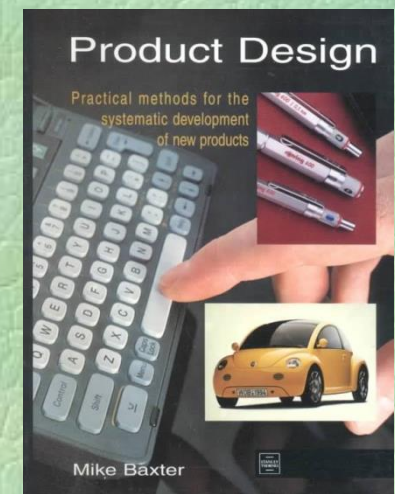4.0 THE PRINCIPLES OF CREATIVITY
5.0 THE INNOVATIVE COMPANY
6.0 PRODUCT PLANNING – OPPORTUNITY SPECIFICATION
7.0 CONCEPT DESIGN
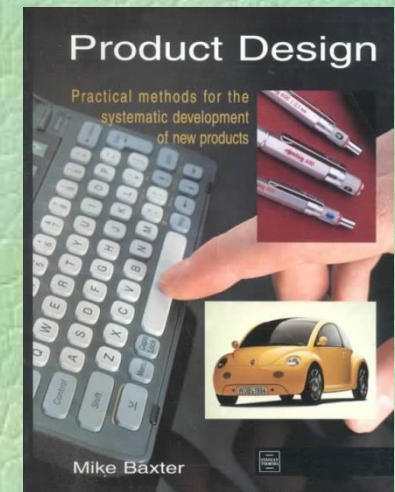8.0 PRODUCT PLANNING – CREATING QUALITY, ADDING VALUE
9.0 EMBODIMENT AND DETAIL DESIGN

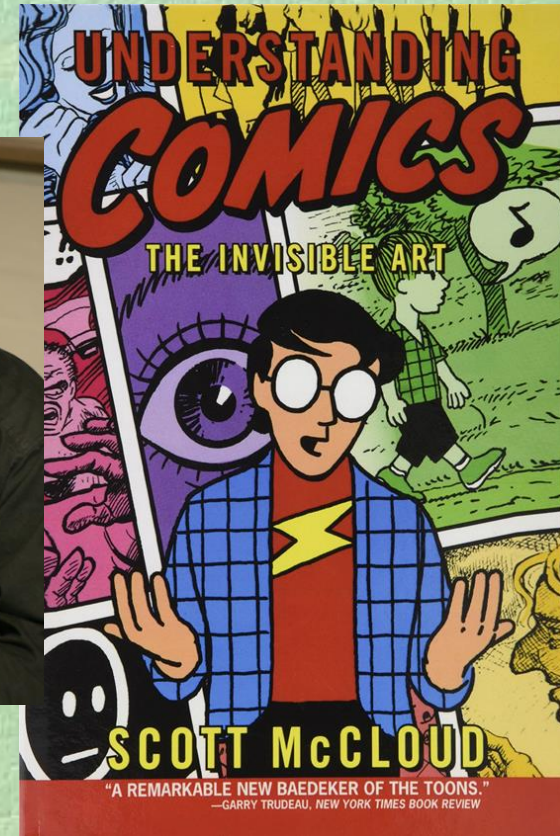10. Baxter, M. (1995) Product Design (p.79-99)
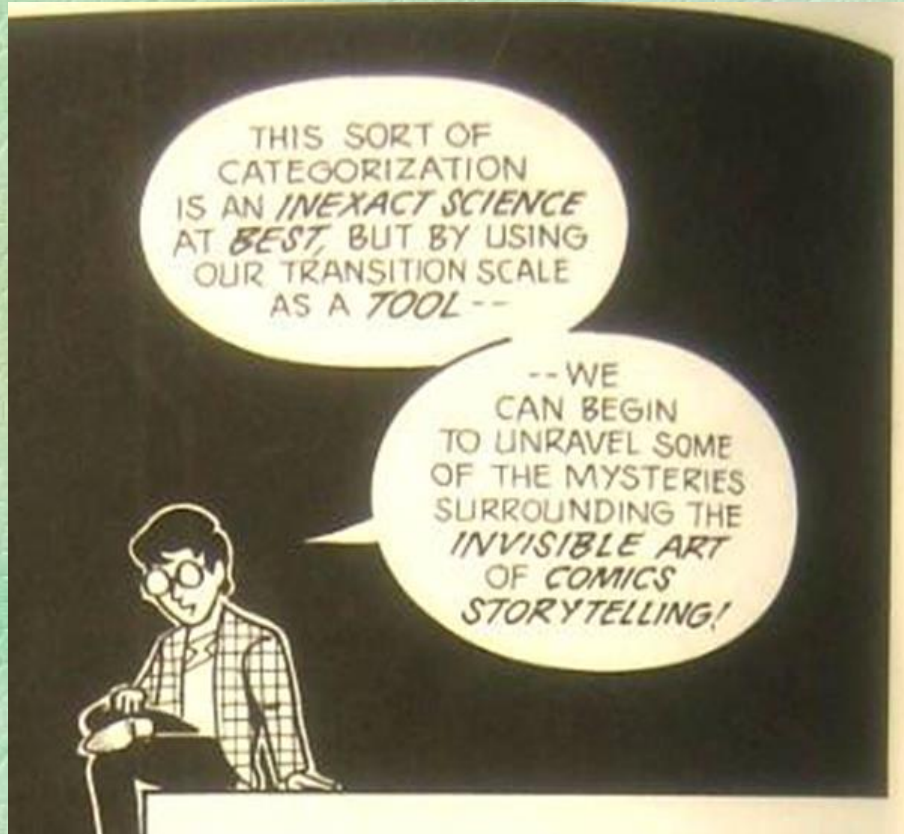
Take home messages:
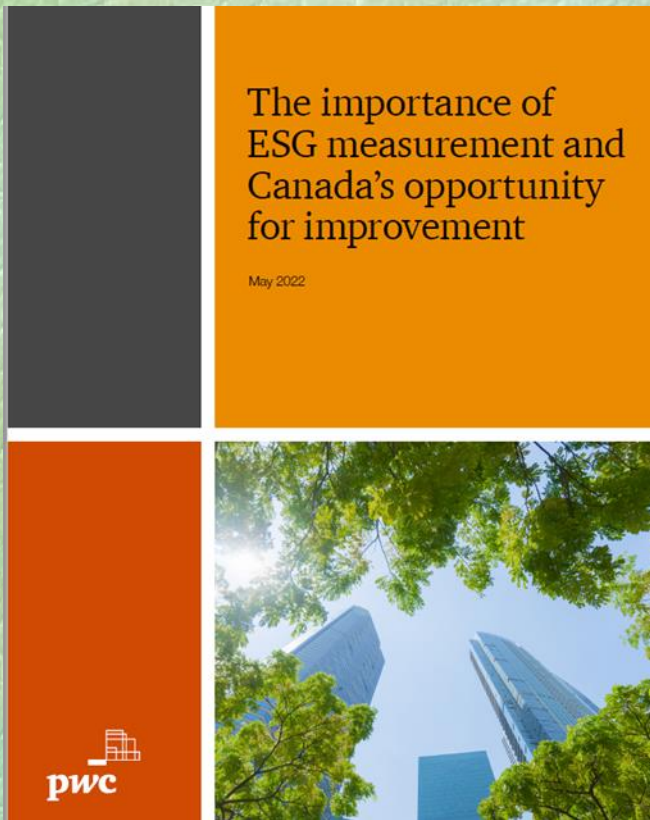
a) This book has some great ideas on Design Toolkits

"A good workman is known by his tools!"

— Mike Baxter (1995)

11. Scott McCloud (1994) Understanding Comics: The invisible ART.

12. PWC (2022) the-importance-of-esg-measurement.

The importance of
ESG measurement and
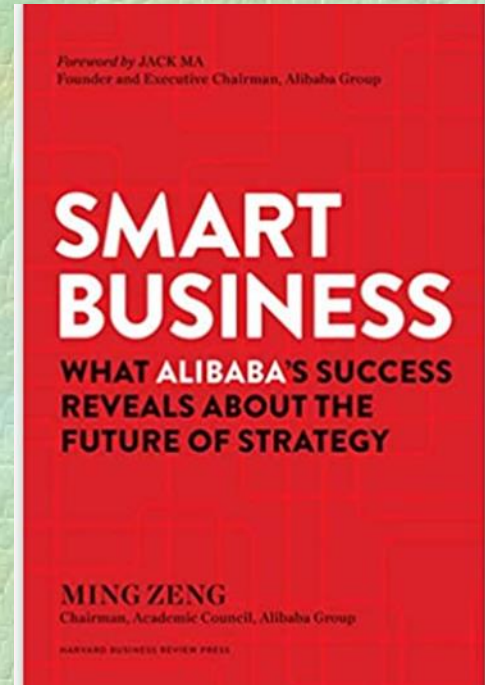Canada's opportunity
for improvement

May 2022

pwc

"ESG is increasingly important and directly linked to value"

— PWC (2022)

https://www.pwc.com/ca/en/today-s-issues/environmental-social-and-governance/measure-esg-performance.html

13. Zeng, M. (2018) Everything Alibaba Does Differently and Better.

SMART BUSINESS
WHAT ALIBABA'S SUCCESS REVEALS ABOUT THE FUTURE OF STRATEGY

MING ZENG
Chairman, Academic Council, Alibaba Group

"Business environment is too fluid and no leaders will know the concrete steps forward. Instead, leaders should set the goals and create the environment for staff to innovate and learn from user feedback."
— Ming ZENG (2018)

14. Pearlstine, N., Pierson, D., Dixon, R., Cloud, D.S., Su, A. and Lu, M.H. (2019) Who is the man behind Huawei and why is the U.S. intelligence community so afraid of his company - Los Angeles Times
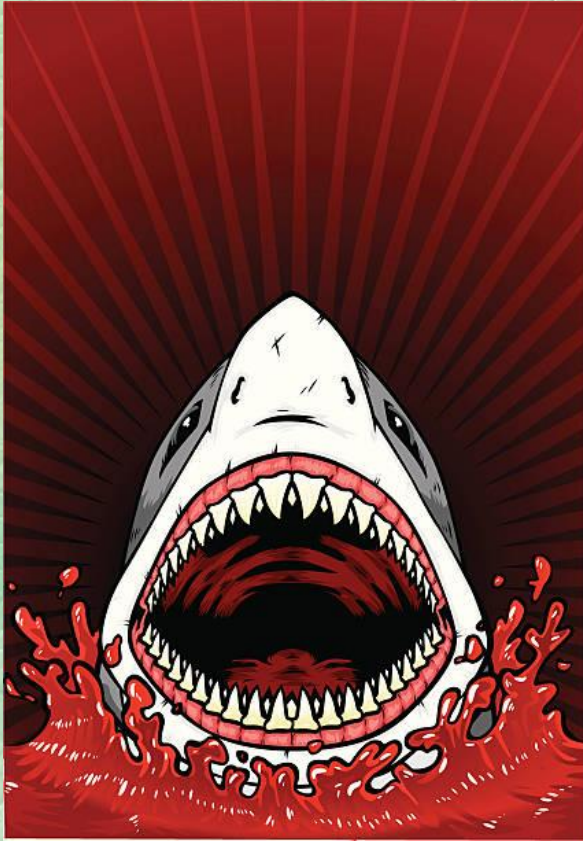

"In a small, gray-carpeted room on one of its campuses, the company keeps a 10-volume printed registry under a glass case. It contains the names of close to 100,000 employees said to be the company's only shareholders. A Times reporter is shown the names, identification numbers, departments and the total shares owned."
— LA Times (2019)

Beyond DISRUPTION ….

https://thinkers50.com/awards/awards-2019/

Kim and Mauborgne (2019).

OVER ONE MILLION COPIES SOLD

International Bestseller

BLUE
OCEAN
STRATEGY

How to Create
Uncontested Market Space
and Make the Competition Irrelevant

W. Chan Kim · Renée Mauborgne

HARVARD BUSINESS SCHOOL PRESS

https://www.istockphoto.com/hk/%E5%
9C%96%E7%89%87/bloody-shark

#1 **AMY C. EDMONDSON**

Pioneer and champion of psychological safety, studies people, projects and organizations to uncover the secrets of successful teaming.

Edmondson's work on psychological safety has be[No Title]dbreaking. Her blueprint on creating a fear-free culture is essential, she argues, for organizations to be able to thrive in today's knowledge economy in which new ideas and critical thought are essential to success. She has also explored the concept of teaming in dynamic work environments, and demonstrated how cross-organizational teaming can impact the building of smart cities.

#2 **Rita McGrath**

Globally recognized expert on strategy, innovation, and entrepreneurship; champion of harnessing disruptive influences for competitive advantage.

#3 **W. Chan Kim & Renée Mauborgne**

Inventors of the ground-breaking "blue ocean strategy", paving the way for organizations to break out of ...

#4 **Alex Osterwalder & Yves Pigneur**

Osterwalder and Pigneur created the Business Model Canvas, an innovative strategy management ...

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2.2 Who am I?

- Bio-inspired computational models for sound separation
Patent technology for audio:
(https://ieda.ust.hk/dfaculty/so/9224.MP4)

- Bio-inspired computational models for machine vision
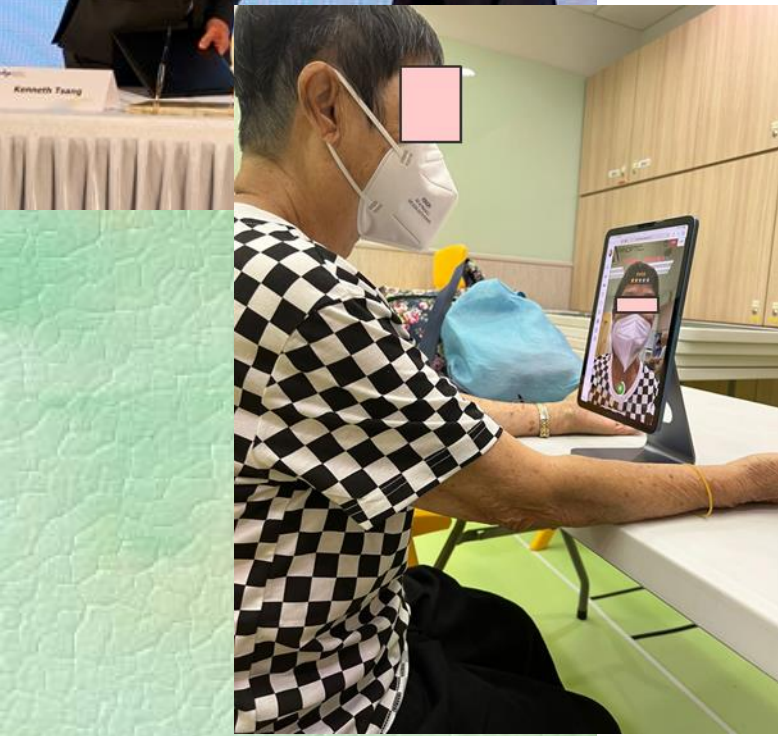Patent technology for vision:
(https://youtu.be/Ruk-xxXRtws)

Besides academic research, Prof So is an also entrepreneur on disruptive advanced audio and vision products. He has founded two HKUST start-up companies – both located at HKSTP.

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Since 2021…

Since 2022…

30 Jan 2023

Linked in

Jobs ▼   Gobi Partners GBA   Hong Kong

Gobi Partners GBA'S Post

Gobi Partners GBA
5,020 followers
4d

#GobiPortfolio | PanopticAI, Hong Kong's leading health and wellness monitoring startup, announced a deal closing on a seed-round funding co-led by Alibaba Entrepreneurs Fund (AEF) and Gobi Partners GBA (Gobi GBA), with participation from the The Hong Kong University of Science and Technology Entrepreneurship Fund (E-Fund) and other renowned investors, marking a promising move in the digital healthcare industry.

Founded by researchers and scientists from The Hong Kong University of Science and Technology, PanopticAI is innovating next-generation digital health solutions to provide users with a holistic analysis of their health. Vitals, the company's camera-based health and wellness monitoring solution, empowers everyone to take charge of their health - especially the lower income brackets and other vulnerable segments across the globe - with affordable and quality health care services that can be easily accessed through our everyday devices.

Chibo Tang, Managing Partner of Gobi Partners GBA, said, "The digital healthcare industry is in need for disruptive innovation. We believe PanopticAI's technology and scientific breakthroughs have the potential to create significant impact in the future of remote healthcare, and strengthen global health risk management."

Read full story: https://lnkd.in/g_6ivgEE

2.3 Who are you?

Please introduce yourself ….

3.0 Learning by doing
3.1 Course grading

Course Grading (There will be 8 assignments):

Assignments	80% (a mixture of individual & team)*
Participation (not attendance)	20% **
Total	100%

* All team assignments will be counted and the best 3 individual assignments will be counted.
** Examples of participations include asking questions in class, vis email, … etc

4.0 Assignments ONE

Assignment One

A1: form team of 3 and each member should choose a different "famous name" to review:

Choose one out of these 6 famous names (Raymond Loewy; Peter Behrens; Lillian Gilbreth; Henery Dreyfuss; Neil McElroy; and Scott Cook), research their contributions on product design and write in **your own words** (200-300 words) about TWO best known design examples from him / her and why did you pick this product example. Pls include full citations to the reference link (reference is not counted into the 300 words). Please include a picture of the chosen TWO DESIGNS.

[All past assignments have been entered to the plagiarism database (e.g., turnitin; ithenticate), so please do NOT copy].

Deadline: Before Lecture 2 on 14 Feb.

A1 is a group assignment (but with individual submission) and the average of the three assignments will be the team mark. This is done so to maximize the flexibility for team formation or team changing before Assignment two.

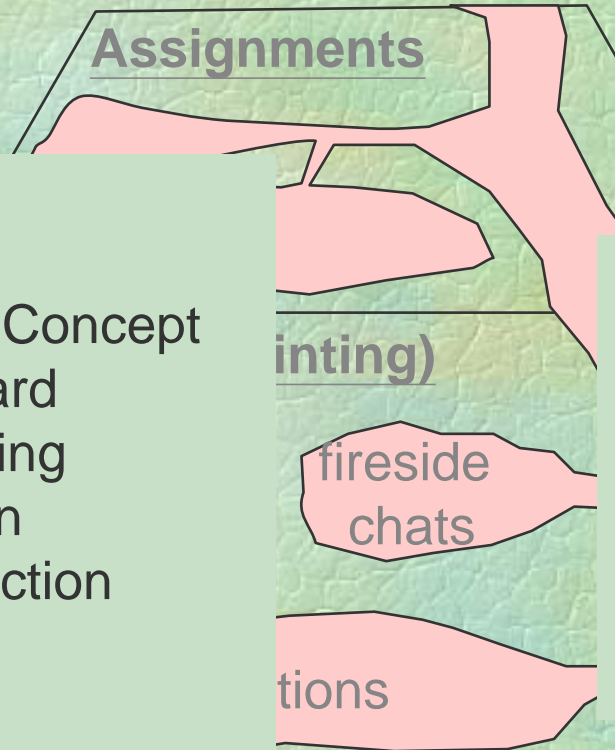(Please put the names and student number of you team members on your individual assignment as well).

==> after A1 and before A3, a team can remain, or it can be dissolved and regroup if the members wish to do so.

Criteria	%
Your OWN words Pls make sure the % similarity score from Turnitin is 5% or less. [If found copy, the entire A1 will get ZERO mark]	50
Logics of your first chosen Design Please explain your choice of the first Design and why you picked it.	15
Logics of your second chosen Design Please explain your choice of the second Design and why you picked it.	15
Correct Citations	20

Tree of Learning

Assignments

- L1: Intro+Disruptive
- L2: Value+ESG
- L3: Design1: Needs-to-Concept
- L4: Design2a: Storyboard
- L5: Design2b: Prototyping
- L6: Design3: Production
- L7: IP branding & protection
- L8: Don Normon
- L9: Contextual Design
- L10: Finance $ & Startup
- L11: Nam Suh (Axiomatic Design)
- L12 Scott Hurff (Apps)

(inting)

fireside chats

tions

materials

- Winnie Wai (Design)
- Simon Law (Sino Land)
- Sigurd Berg (IP/Brand)
- 艾永亮 (Business Consultant)
- Calvin (IoT solutions)
- Zhanwei (one-stop service)
- Stephen & Jacky (Kerry Logistics)
- Jensen Fong (Kick starter)

pwc

Scott

Nam

Clayton Christensen

Mark Bonchek

Cara France

Steve Jobs

Karl Ulrich

Steven Eppinger

Mike Baxter

Scott McCloud

Don

Hugh

Karen

50
50

3.2 The syllabus (Let's switch to the syllabus).

3.3 Fire side chats

Any questions? And let's dive into it!

4.0 Disruptive Innovations
4.1 The theory, predictions and strategies
4.2 Is Uber a Disruptive Innovation?
4.3 Why getting it right matters?
4.4 What a Disruptive Innovation Lens Can Reveal
4.5 How The Thinking About Disruption Has Developed

1. Clayton M. Christensen, Michael E. Raynor, and Rory McDonald (2015) What is Disruptive Innovation?

A short intro of Disruptive Innovations
https://www.youtube.com/watch?v=Cu6J6taqOSg

Let's actually listen to Clayton's lecture at U of Oxford

1952-2020

https://www.youtube.com/watch?v=ou0iWWtjAHk

[Let's focus on the first 15 mins]

4.1 The theory, predictions and strategies

new-market footholds.

low end footholds

Higher

PERFORMANCE CUSTOMERS WILL PAY FOR

PRODUCT PERFORMANCE

Incumbent's sustaining trajectory

Entrant's disruptive trajectory

High end of the market
MOST PROFITABLE

Mainstream

Low end of the market
LEAST PROFITABLE

Lower

Time

SOURCE CLAYTON M. CHRISTENSEN, MICHAEL RAYNOR, AND RORY MCDONALD
FROM "WHAT IS DISRUPTIVE INNOVATION?" DECEMBER 2015

© HBR.ORG

incumbents   vs   entrants

Giant Iron mills   Mini-Iron mills
GM Motors   Toyota

4.2 Is Uber a Disruptive Innovation?

In short, NO! It is successful but it is NOT competing at the low-end with existing taxi business. It is Not a disruptive innovations but it is efficiency innovations. With that said, Uber BLACK can be disruptive to expensive driver services.

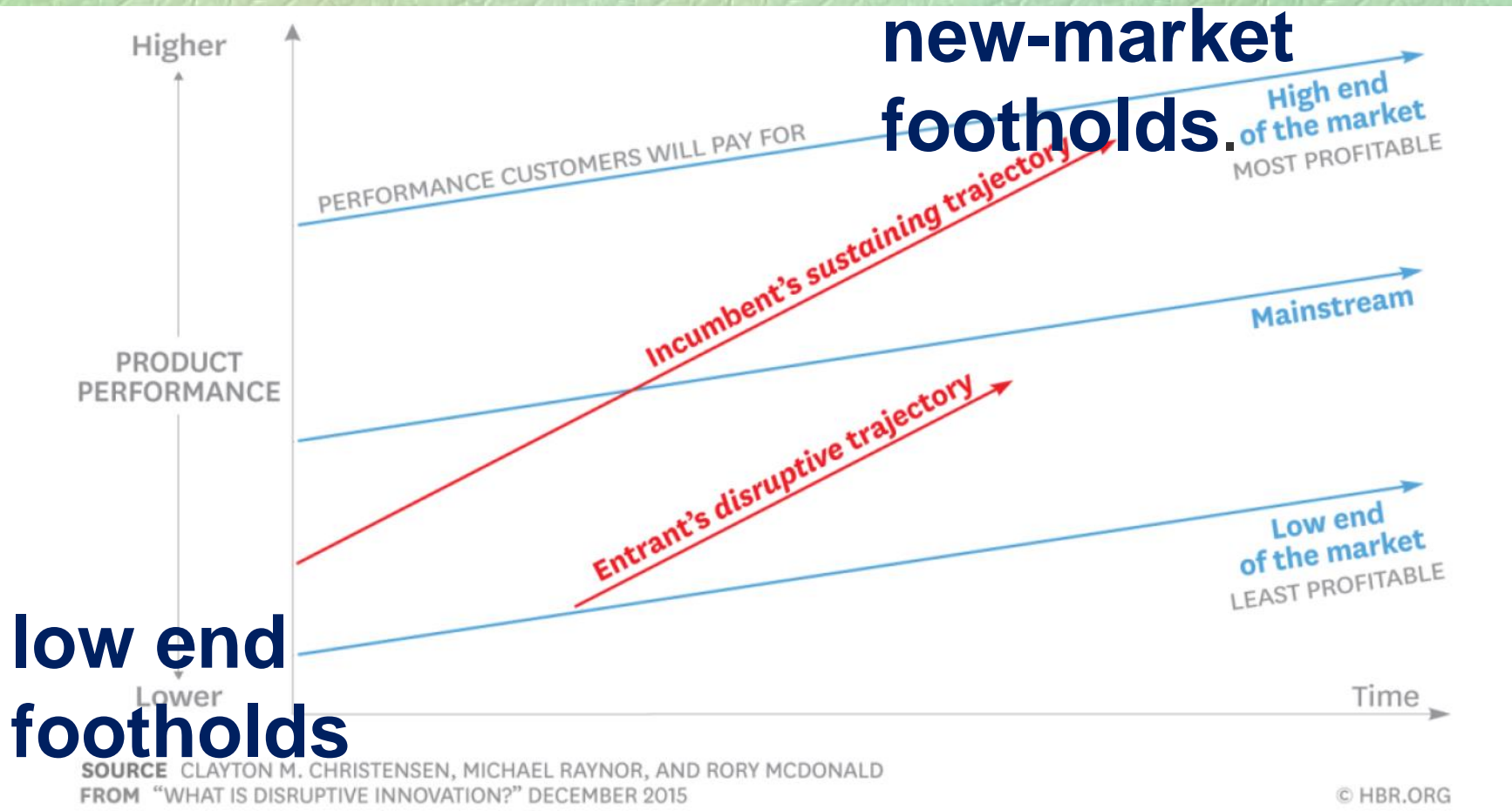What is? The PC is a disruptive innovation to the Main-frame industry…

At first, the entrants can be ignore…. Not attractive… so it makes senses for the giants to get out of the market ….
then
…. The entrants just get BETTER and BETTER

What about iPHONE?

No for the smart phone…… but YES against laptop business

Class exercise: Why iPhone disrupted laptop?

new-market footholds.

low end footholds

Higher

PERFORMANCE CUSTOMERS WILL PAY FOR

Incumbent's sustaining trajectory

PRODUCT PERFORMANCE

Entrant's disruptive trajectory

High end of the market
MOST PROFITABLE

Mainstream

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FROM "WHAT IS DISRUPTIVE INNOVATION?" DECEMBER 2015

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incumbents   vs   entrants

Silicon Graphics   PC with graphic cards
Laptop   iPhone

Super Cockpit Program
Wright Patterson AFB

The rise and fall of Silicon Graphics

https://en.wikipedia.org/wiki/Silicon_Graphics

1981 - November 1981 by Prof. Jim Clark from Stanford U.

It's Geometry Engine was the first VLSI implementation of a geometry pipeline

In 1997, An SGI Oxynx II priced at HK$1M

On April 1, 2009, SGI filed for Chapter 11 bankruptcy protection and announced that it would sell substantially all of its assets

Let's look at Nvidia

https://en.wikipedia.org/wiki/Nvidia

Nvidia was founded on April 5, 1993 by Jensen Huang (CEO as of 2020), a Taiwanese American, previously director of CoreWare at LSI Logic and a microprocessor designer at AMD, and Chris Malachowsky, an ECE engineer who worked at Sun Microsystems, and Curtis Priem, previously a senior staff engineer and graphics chip designer at Sun Microsystems with USD40,000 (0.3M HKD).

$\Rightarrow$ Graphics accelerated computing

$\Rightarrow$ IPO on January 22, 1999

new-market footholds.

low end footholds

incumbents   vs   entrants

Silicon Graphics   PC with graphic cards
Laptop   iPhone

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4.3 Why getting it right matters?

It matters because if a small innovative company wrongly try to fight the Giants head on….. They will get KILLED and FAIL !

If you do it right, disruptive innovations BUYS YOU TIME!!! To get BETTER and BETTER.

4.4 What a Disruptive Innovation Lens Can Reveal

Disruptive Innovations

Sustaining Innovations
    This is the typical progressive innovations that all business need to invest in order to stay in the game.

Efficient Innovations
    This is usually introduced by a new technology.

As a startup or entrants / disrupters … we have to be very careful that we are NOT working on just progressive sustaining innovations. We MUST have the injection of NEW technology (i.e., Efficient Innovations) ….

However, this is still NOT enough….

WHY?

4.5 How The Thinking About Disruption Has Developed

It started from analyses of business world on how good business failed. The suffering companies of disruptive innovations MADE ALL THE RIGHT DECISIONS!

Japan disrupted USA ….. And then China is disrupting Japan ….
And India will disrupt …….

https://www.timesnownews.com/business-economy/industry/article/tcs-infosys-hcl-tech-and-wipro-to-hire-91000-freshers-from-campuses-for-fy22/708944

But the trade war and COVID-19 has interrupted the market ….
https://www.timesnownews.com/business-economy/companies/amid-layoff-wave-it-majors-infosys-tcs-hcl-tech-wipro-see-sharp-drop-in-hiring-heres-how-many-people-they-hired-in-q3-article-97087454

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https://www.scmp.com/economy/article/3208033/global-impact-us-china-tech-wars-toll-made-visible-worlds-largest-electronics-show

QUESTIONS TO BE ASKED

Q1: Do you have a sector of potential customers who have previously gone without the product because they could not find suitable products?

Q2: Do we see a novel technology or business model that allows new entrants to move upmarket without emulating the incumbents' high costs?

Q3: Are you working in one of the "giant" companies?

Q4: Can you use the ASUS model for your product business? (ASUS directly partnership with its incumbent DELL).

Q5: Are you working for a disrupter? Do you want to start a disruptive business?

Q6: How your disruptive innovation can steer clear from US-China Tech war?

Let's open the floor for some discussions before moving on to the next topics.

What do you think about

Nissan and Infinity ?

Gogovan   and   lalamove ?

https://www.wsj.com/articles/BL-DGB-38943

Nikkei 27663.39 1.89% ▼   Hang Seng 28283.71 0.94% ▼   U.S. 10 Yr 0/32 Yield 1.064% ▼   Crude Oil 52.14 0.11% ▼   Yen 104.69 0.01% ▲

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Chinese Social Network Renren Invests In Hong Kong Startup GoGoVan

By *Yun-Hee Kim*
Nov. 18, 2014 2:16 am ET

PRINT   AA TEXT

Chinese social network Renren took a roughly 10% stake in Hong Kong-based startup GoGoVan this month, giving it an additional $10 million in funding to expand across Asia.

GoGoVan is a free, van-hailing app available on Apple's iOS and Google's Android devices. It was set up in July 2013 in Hong Kong by five co-founders including Steven Lam, a graduate of the University of California, Berkeley, who wanted to solve a logistical problem in big cities like Hong Kong. It aims to be the Uber of sorts for moving

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S.F. Express merger with Kerry Logistics creates logistics powerhouse

Analysts say deal gives China's 'FedEx' international reach, import/export services

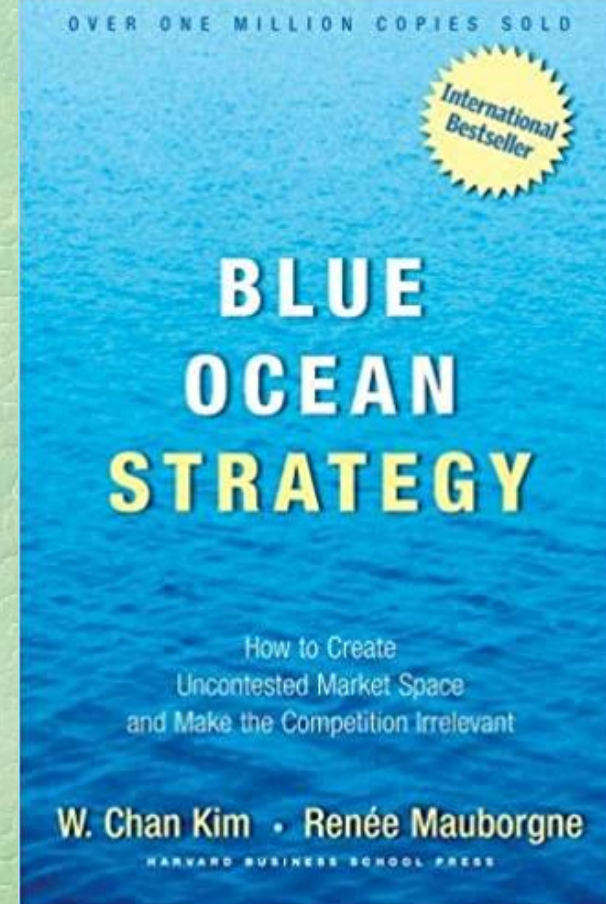Eric Kulisch 🐦 • Friday, February 12, 2021

Beyond DISRUPTION ….

Kim and Mauborgne's blue ocean strategy pioneered a way to create and capture new, uncontested market space. They coined the terms "red ocean" – the known, competitive market within industry boundaries – and "blue ocean" – the unknown and uncontested market space, where demand is created, spawning new opportunities and growth. Kim and Mauborgne also developed the concept of "non disruptive creation", challenging the notion that innovation must be disruptive.

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and Make the Competition Irrelevant

W. Chan Kim · Renée Mauborgne

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– Variety Magazine

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#1   AMY C. EDMONDSON

Pioneer and champion of psychological safety, studies people, projects and organizations to uncover the secrets of successful teaming.

Edmondson's work on psychological safety has been [No Title] dbreaking. Her blueprint on creating a fear-free culture is essential, she argues, for organizations to be able to thrive in today's knowledge economy in which new ideas and critical thought are essential to success. She has also explored the concept of teaming in dynamic work environments, and demonstrated how cross-organizational teaming can impact the building of smart cities.

#2   Rita McGrath

Globally recognized expert on strategy, innovation, and entrepreneurship; champion of harnessing disruptive influences for competitive advantage

#3   W. Chan Kim & Renée Mauborgne

Inventors of the ground-breaking "blue ocean strategy", paving the way for organizations to break out of ...

#4   Alex Osterwalder & Yves Pigneur

Osterwalder and Pigneur created the Business Model Canvas, an innovative strategy management ...

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the
fearless
organization

Creating **Psychological Safety** in the
Workplace for Learning,
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HARVARD BUSINESS SCHOOL

WILEY

"The Fearless Organization: Creating Psychological Safety in the Workplace for Learning, Innovation, and Growth offers practical guidance for teams and organizations who are serious about success in the modern economy. With so much riding on innovation, creativity, and spark, it is essential to attract and retain quality talent—but what good does this talent do if no one is able to speak their mind? The traditional culture of "fitting in" and "going along" spells doom in the knowledge economy. "

- Amy C. Edmondson

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Q & As