

# Management de l' (Open)-Innovation

M2 Management de la  
Transition Ecologique et  
de l'Économie Circulaire  
2020



# 3 parties

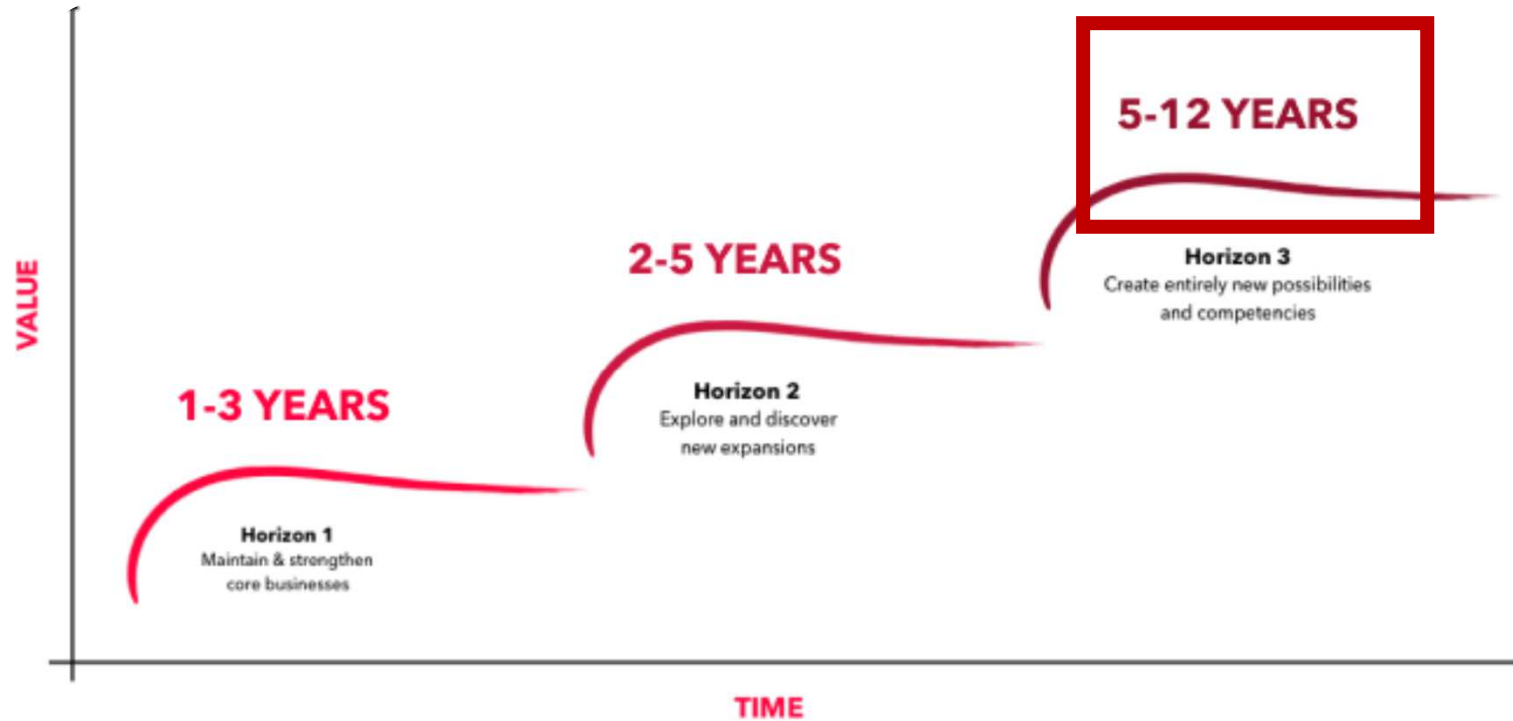
- Introduction
- Partie 1: Rappel Innovation  
(*niveau Licence*)
- Partie 2: Open Innovation
- Partie 3: Moonshot et Open-Innovation**

# Qu'est-ce qu'un moonshot?

- La pensée Moonshot, c'est quand vous choisissez un énorme problème, comme le changement climatique,
- et vous créez une solution radicale au problème,
- Pour ce faire, vous devez abandonner l'idée de créer une amélioration de 10%. Au lieu de cela, l'accent est mis sur une solution qui apportera des améliorations décuplées (ou 10x), ou le résoudra complètement.



# Qu'est-ce qu'un moonshot?



**Horizon 3 :  
a bridge from  
today**

(source:  
The McKinsey  
3 Horizon Model)

# Qu'est-ce qu'un moonshot?



<https://www.youtube.com/watch?v=pEr4j8kgwOk&feature=youtu.be>



# Qu'est-ce qu'un moonshot?

- If you were a baseball player would you try the homerun, or would you play safe?
- In other word, if you had 10% chance of **a 100 times payoff, would you try it?**

## Qu'est-ce qu'un moonshot?

Most large organizations embrace the idea of invention, but are not willing to suffer the string of failed experiments necessary to get there. Outsized returns often come from betting against conventional wisdom, and conventional wisdom is usually right. Given a ten percent chance of a 100 times payoff, you should take that bet every time. But you're still going to be wrong nine times out of ten.

- Jeff Bezos, 2016 Shareholder Letter

# Qu'est-ce qu'un moonshot?

Découvrons les moonshots de Google

- <https://www.youtube.com/watch?v=2t13Rq4oc7A>  
(2:46 =>11:30)



# Qu'est-ce qu'un moonshot?

- Explorez les 17 objectifs et choisissez-en un

<https://sdgs.un.org/>



# Qu'est-ce qu'un moonshot?

A Decade of Moonshots at Alphabet X ... addressing huge problems, with breakthrough technologies, creating radical innovation

February 15, 2020

10 years ago this week, Astro Teller was asked by Google's Larry Page and Sergey Brin to run a great experiment. To build a "moonshot factory". They called it "X".

Astro (his real name is Eric but his friends thought his spiky hair reminded them of astroturf) was born in Cambridge, England then grew up just outside Chicago, Illinois. He had great pedigree, his grandparents include French economist and mathematician Gérard Debreu and Hungarian-born American theoretical physicist Edward Teller.

Astro followed a similar path, studying computer science at Stanford, and then gained a PhD in AI. He wrote a novel, *Exegesis*, when he was 27 about an AI program that develops consciousness and will and begins to correspond with its creator. His early career saw him co-found BodyMedia,



2010

Un phénomène croissant

Technology

## Alibaba to Spend \$15 Billion Exploring 'Moonshot' Projects

2017

By Lulu Yilun Chen

THE WALL STREET JOURNAL

04:28 UTC+2

TECH

### The Man Who Bets Tencent's 'Moonshot' Money

David Wallerstein is guiding Chinese internet giant's investments in electric flying cars, agriculture startups



2020

TECH

### Spotify CEO to invest over \$1 billion of his own wealth for 'moonshot' bets in Europe

PUBLISHED THU, SEP 24 2020-10:53 AM EDT | UPDATED THU, SEP 24 2020-12:07 PM EDT

# Qu'est-ce qu'un moonshot?

- Un intérêt croissant



# Qu'est-ce qu'un moonshot

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Innovation | What a Good Moonshot Is Really I

2 320 views | Apr 10, 2019, 10:53am EDT

## Moonshot Thinking For C-Level Executives In The Age Of Artificial Intelligence

esade

Esade Business & Law School Contributor

Leadership Strategy

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TECH

## The Man Who Bets Tencent's 'Moonshot' Money

David Wallerstein is guiding Chinese internet giant's investments in electric flying cars, agriculture startups



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975 views | Mar 4, 2020, 05:49pm EST

## Moonshots And MoneyMakers: The New Paradigm For Entrepreneurs



Lewis Schiff Contributor

Small Business Strategy

I write about the greatest business challenges & the biggest successes



# Qu'est-ce qu'un moonshot?

## Un changement dans les pratiques de stratégie

### STRATEGIC PLANNING

- ⇒ L'approche :  
"present-forward"
- ⇒ Objectif : optimiser l'allocation des ressources en fonction de l'analyse de la situation d'aujourd'hui
- ⇒ Framework : AFI  
(Analyse, Formulation, Implémentation)
- ⇒ Hypothèse : demain sera à peu près comme aujourd'hui, et idem pour après-demain.

Dans une période stable

### SCENARIO PLANNING

- ⇒ L'approche :  
"future\$ and back"
- ⇒ Objectif : se préparer à d'autres futurs
- ⇒ Framework : "WHAT IF"
- ⇒ Hypothèse : attendez-vous à ce que des événements imprévisibles se produisent

Dans une période turbulente

### MOONSHOT PLANNING

- ⇒ L'approche :  
"desired future back"
- ⇒ Objectif : spécifiez à quoi vous voulez que votre cœur de métier ressemble, à quels marchés adjacents vous voulez vous attaquer et les moonshots à viser
- ⇒ Framework : créer VOTRE scénario positif
- ⇒ Hypothèse : "disrupt yourself"

Dans une période turbulente



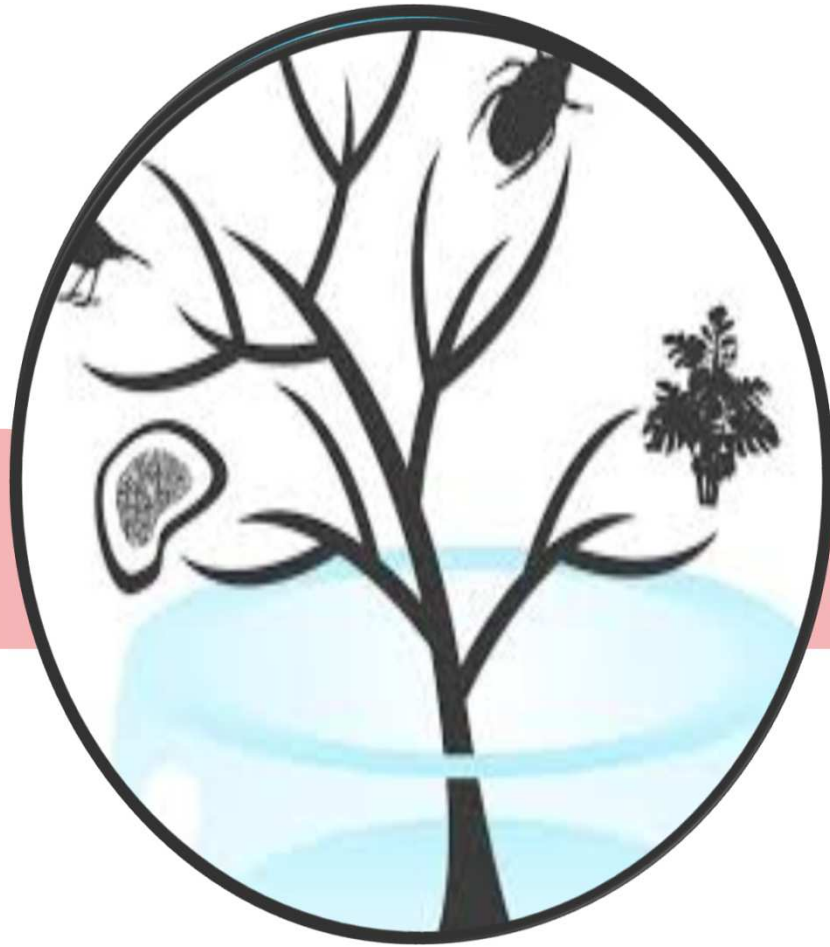
# Takeaways

- Les « moonshots » : une réalité
  - cas réel de moonshot,
- Une réalité avancée :
  - des articles de presse avec commentaires sur le succès et les échecs
  - Des formations mba,
  - Un critère d'investissement,
- un nouveau processus stratégique :
  - « moonshot planning»
  - Au niveau « C Level executive »,

# Organisation du cours

- Suivre la méthode d'enseignement d'Harvard basée sur l'étude de cas
- Chaque étude de cas, une occasion pour approfondir notre compréhension :
  - des moonshots (nouveau type d'innovation)
  - de l'Open Innovation (comme moyen pour atteindre/réaliser un moonshot)
  - du management de l'innovation





## **L'origine des moonshots**



# L'origine des moonshots

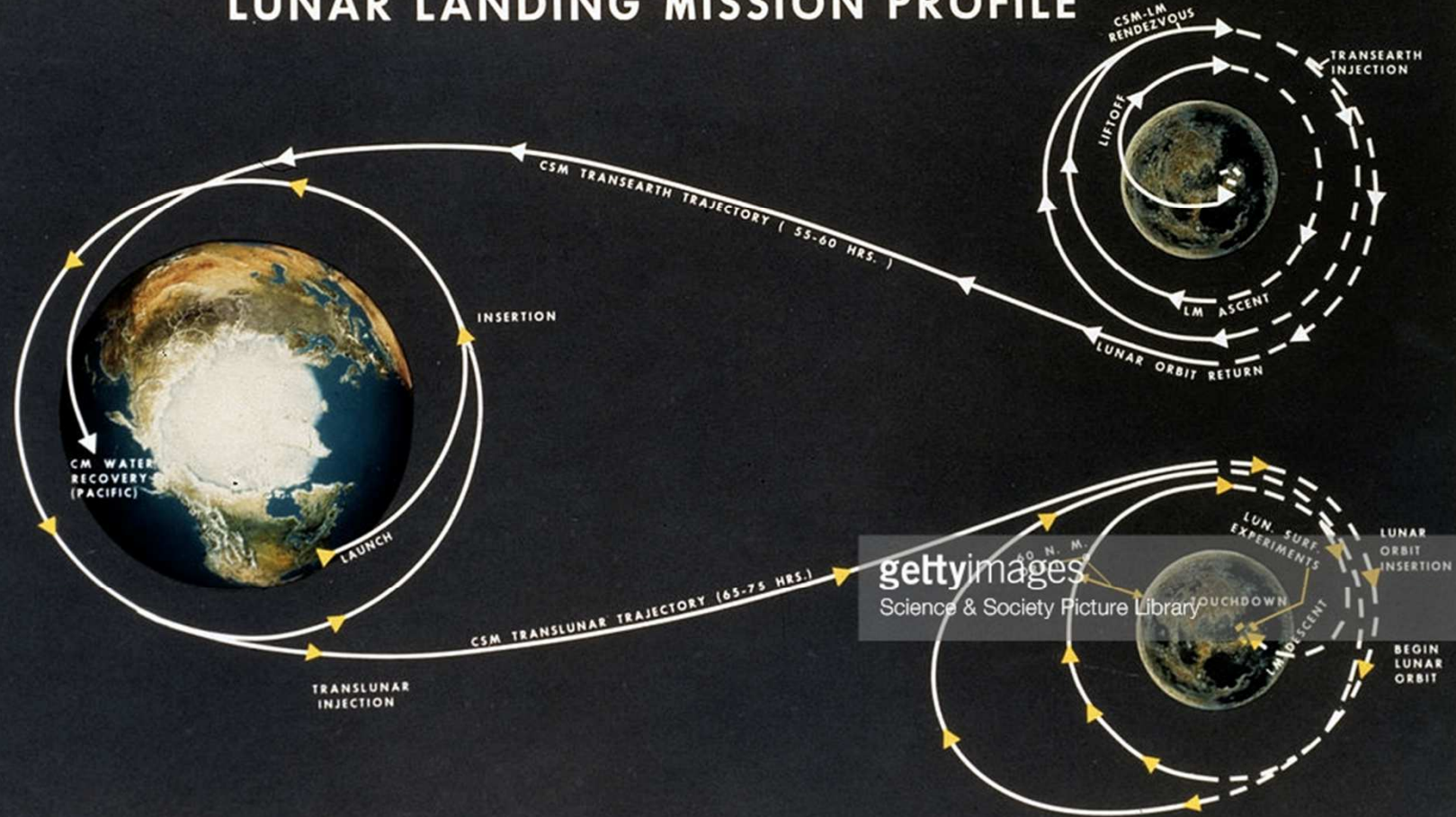
Videos :

- <https://www.youtube.com/watch?v=TUXuV7XbZvU>
- <https://www.youtube.com/watch?v=kwFvJog2dMw>

“This nation should commit itself to achieving the goal, before the decade is out, of landing a man on the moon and returning him safely to the Earth.”



# APOLLO LUNAR LANDING MISSION PROFILE



gettyimages  
Science & Society Picture Library

NASA HQ FP69-16541 6-11-69

90736977

# Origine des moonshots



an obvious extrapolation  
would simply have been to  
fly farther into space

# Origine des moonshots

Project Apollo, 1960 - 1973	Actual	Inflation Adjusted
Spacecraft	\$8.1 billion	\$81 billion
Launch Vehicles	\$9.4 billion	\$96 billion
Development & Operations	\$3.1 billion	\$26 billion
Direct Project Costs	\$20.6 billion	\$204 billion
Ground Facilities, Salaries, & Overhead	\$5.2 billion	\$53 billion
Total Project Apollo	\$25.8 billion	\$257 billion
Robotic Lunar Program	\$907 million	\$10 billion
Project Gemini	\$1.3 billion	\$14 billion
Total Lunar Effort	\$28 billion	\$280 billion

# Origine des moonshots

- Qu'est ce qu'un moonshot



# Origine des moonshots

## NASA Spinoff Technologies

1. CAT scanner: this cancer-detecting technology was first used to find imperfections in space components.
2. Computer microchip: modern microchips descend from integrated circuits used in the Apollo Guidance Computer.
3. Cordless tools: power drills and vacuum cleaners use technology designed to drill for moon samples.
4. Ear thermometer: a camera-like lens that detects infrared energy we feel as heat was originally used to monitor the birth of stars.
5. Freeze-dried food: this reduces food weight and increases shelf life without sacrificing nutritional value.
6. Insulation: home insulation uses reflective material that protects spacecraft from radiation.
7. Invisible braces: teeth-straightening is less embarrassing thanks to transparent ceramic brace brackets made from spacecraft materials.
8. Joystick: this computer gaming device was first used on the Apollo Lunar Rover.
9. Memory foam: created for aircraft seats to soften landing, this foam, which returns to its original shape, is found in mattresses and shock absorbing helmets.
10. Satellite television: technology used to fix errors in spacecraft signals helps reduce scrambled pictures and sound in satellite television signals.
11. Scratch resistant lenses: astronaut helmet visor coating makes our spectacles ten times more scratch resistant.
12. Shoe insoles: athletic shoe companies adapted space boot designs to lessen impact by adding spring and ventilation.
13. Smoke detector: Nasa invented the first adjustable smoke detector with sensitivity levels to prevent false alarms.
14. Swimsuit: Nasa used the same principles that reduce drag in space to help create the world's fastest swimsuit for Speedo, rejected by some professionals for giving an unfair advantage.
15. Water filter: domestic versions borrow a technique Nasa pioneered to kill bacteria in water taken into space.

# Origine des moonshots

## Step 1: Mercury

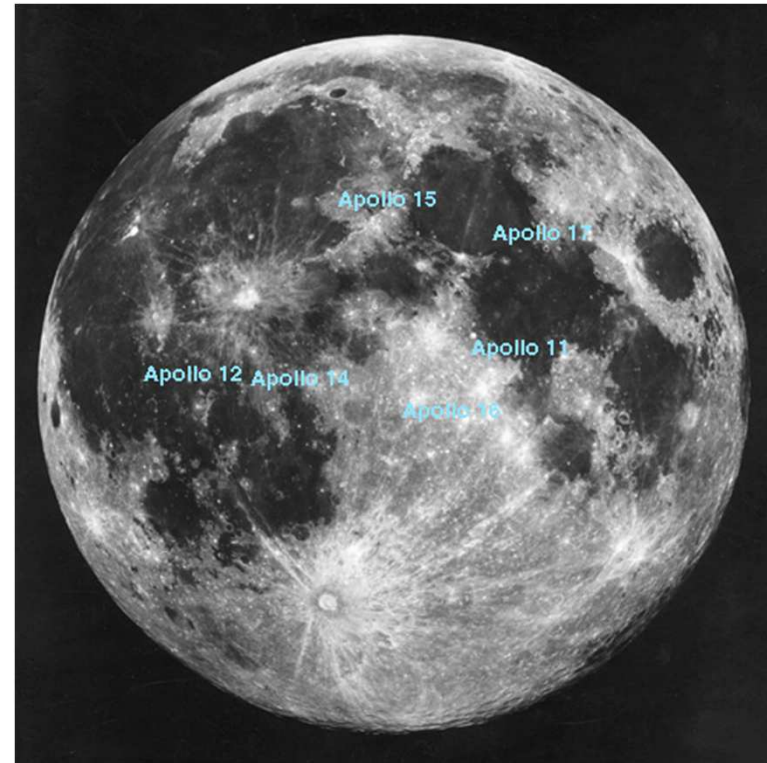
- Leave Earth's atmosphere
- Orbit the Earth
- Re-entry

## Step 2: Gemini

- Leave the capsule, space walk
- Connect two vehicles in space

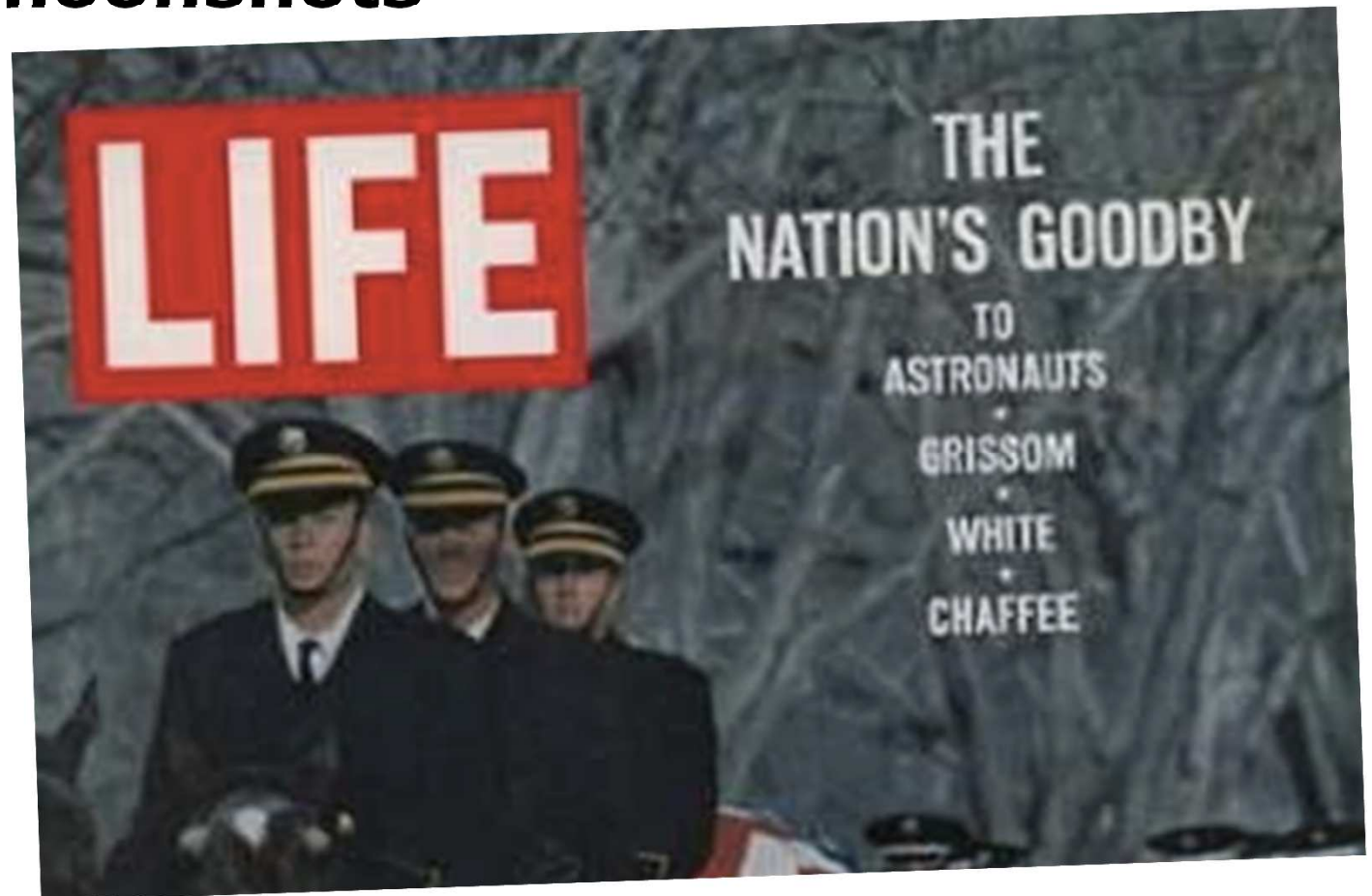
## Step 3: Apollo

- Missions 1-10, prepare for landing
- Missions 11-17, explore the moon



# Origine des moonshots

- TRAGEDIES





# Origine des moonshots

- Pourquoi



# Origine des moonshots

- Russia success in space



# Origine des moonshots

“a difficult or expensive task, the outcome of which is expected to have great significance.”

“We choose to go to the moon in this decade and do the other things, not because they are easy, **but because they are hard** because that goal will serve to organize and measure the best of our energies and skills, **because that challenge is one that we are willing to accept**, one we are unwilling to postpone, and one which we intend to win, and the others, too.”

*John F. Kennedy Moon Speech*



# Origine des moonshots

## Scientific Achievements

- Computing
- Communications
- Materials
- Propulsion
- Telemetry
- Radiation Management
- Human response to weightlessness



## Moonshot definition d'après Kennedy's moonshot

1. Imaginatif : une rupture significative (un objectif ambitieux qui « étire » les objectifs actuels de l'organisation).
2. Significatif : dont on s'attend à ce que le résultat a un grand impact sur de nombreuses personnes
3. Inspirer : l'objectif est d'amener les gens à faire des choses extraordinaires.
4. Crédible : nécessite une évaluation détaillée des tendances technologiques sous-jacentes
5. Coûteux, difficile incertain et risqué
6. Pourrait être considéré comme une destination, mais c'est plus un voyage, pas une seule étape ou une activité
7. Libérer de nouvelles sources de croissance

**Pour aller  
plus loin**

vard  
iness  
view

Innovation | What a Good Moonshot Is Really I

Innovation

## What a Good Moonshot Is Really For

by Scott D. Anthony and Mark Johnson

May 14, 2013

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Inspires

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Credible

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Imaginative

# Quizz

- 7 critères!

Question 1. La « voiture sans conducteur » d'Alphabet est-elle un moonshot?

Question 2. En 2012, la PDG de Yahoo! Marissa Mayer a déclaré que le moonshot de son entreprise était d'être « sur chaque smartphone, chaque tablette, chaque jour, pour chaque internaute ». Est-ce un moonshot?

Question 3. Twitter est-il un moonshot ?

Question 4. la Tesla est-elle une moonshot ?

A large red decorative shape on the left side of the slide, consisting of a vertical rectangle on the left and a trapezoidal shape on the right that tapers towards the top.

☐ FIN COURS 1