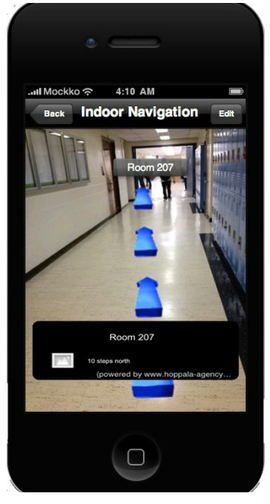
# MAKE INNOVATION HAPPEN!

## INNOVATING THE BUSINESS

# INTRODUCTION

A highly experienced Interaction and UX designer with broad range of professional and technical background. Holds a Masters degree in Integrated Digital Media from Polytechnic School of Engineering, New York University.

Having diverse working background and expertise that spans over technology design, user experience, communication strategies, and corporate business campaigns. Had the chance to work in New York city as an Interaction Designer on multiple projects, such as the award winning EMKI (Edward Kennedy Interactive Educational Museum) and MTA transit way-finding Interactive Kiosks. I have also enjoyed participating in digital media educational events and professional training activities as a principal speaker.



## NYU
### WAYFARER NAV APP

## INTERSECTION
### MTA NYC SUBWAY

## KA.CARE
### INTERACTIVE CENTER

# A.

# INNOVATION

# WHAT IS INNOVATION ?

# EXPERTS DEFINITION OF INNOVATION

Creativity is thinking of something new. **Innovation is the implementation of something new.**

**Paul Sloane**

Anything that is new, useful, and surprising. For me, a great innovation are the simple ones that make you slap your forehead and say, **"Wow, why didn't I think of that?".**

**Drew Boyd**

Something new or different that delivers value to the world, with the key criteria that I'm not innovating if I'm not bettering people's lives. **Simply, it is the future delivered.**

**Jorge Barba**

## WHAT IS INNOVATION?

The only true, sustainable and virtually unlimited source of new growth for any organization is innovation.

It's the process of implementing new ideas to create value for an organization.

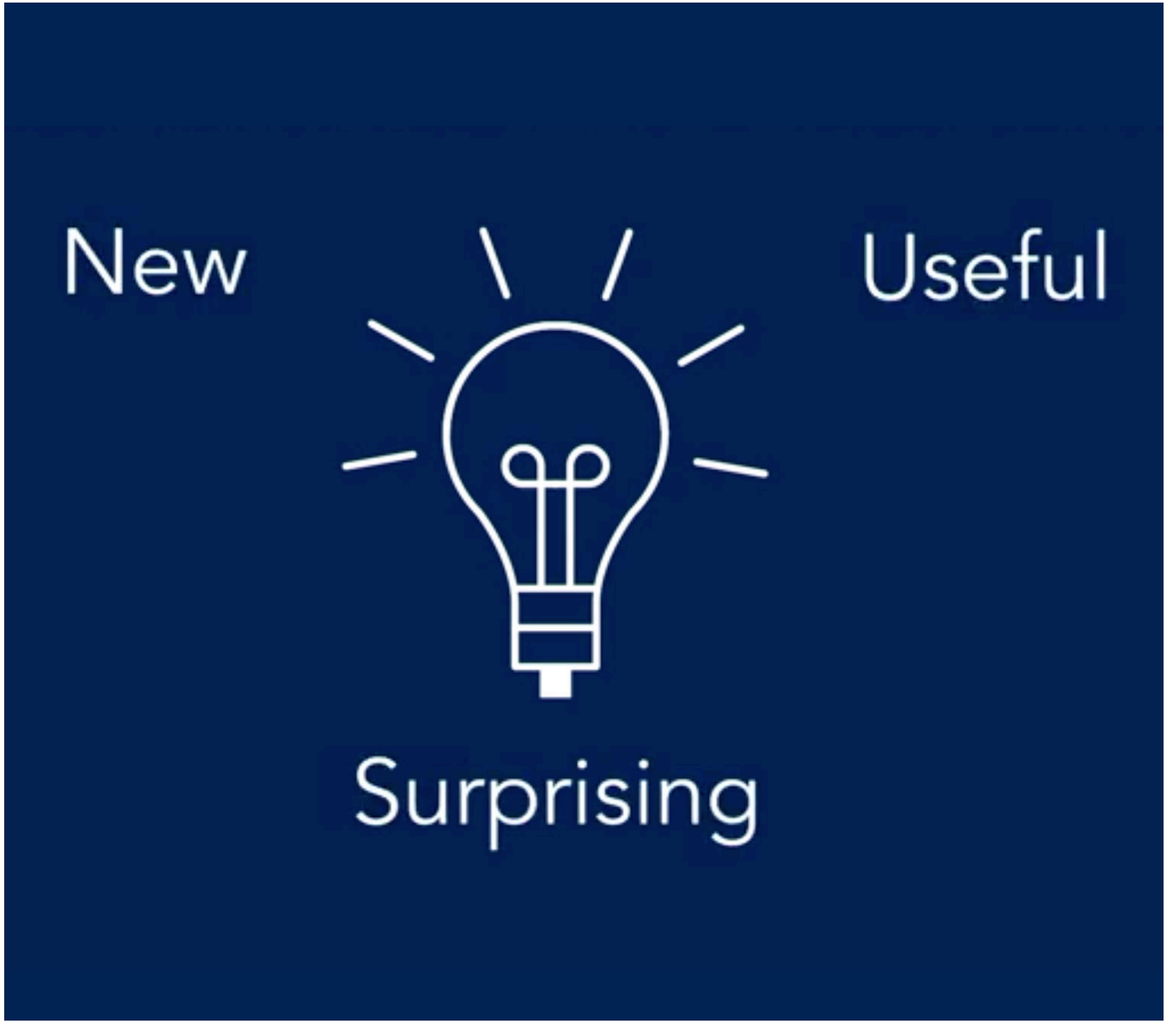
or enhancing an existing one.

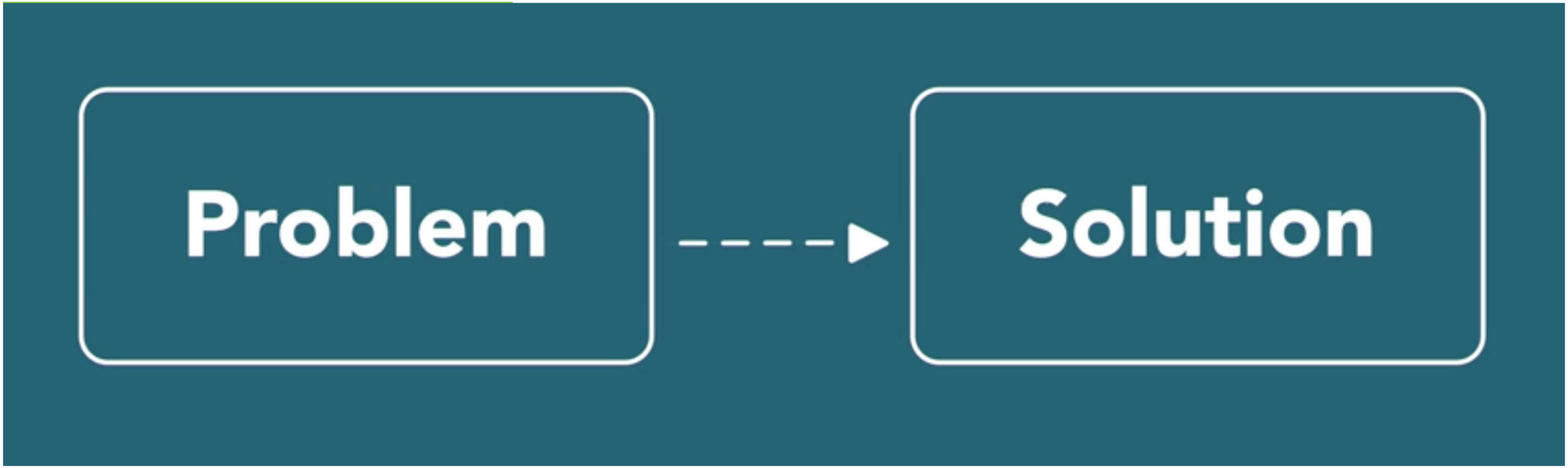
# INNOVATIVE IDEA CRITERIA

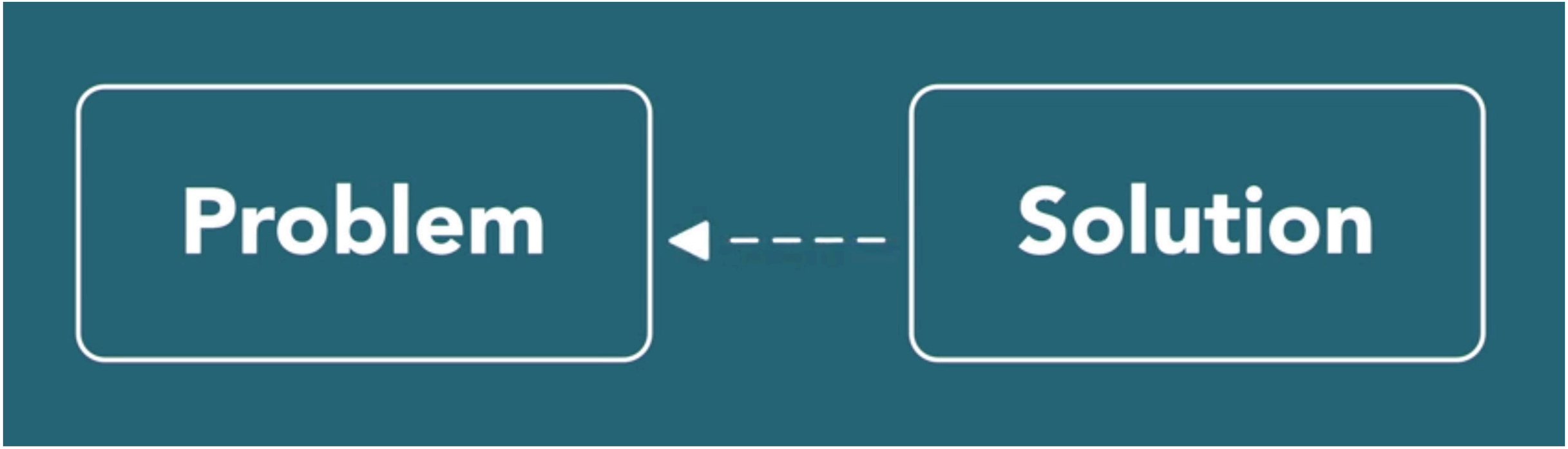
Innovation is the process of taking an idea and putting it into practice.

Creativity, on the other hand, is what you do in your head to generate the idea,

an idea that meets three criteria:




Problem
Solution


Problem
Solution

# SHAPE THE IDEA

## THE MARKET FILTER

### "Should we do it?"

Does this new configuration create any advantage or solve some problem? Is there a target audience who would find this beneficial? Does it deliver an unmet need?

## THE IMPLEMENTATION FILTER

### "Can we do it?"

Do we have the technical know-how to make this concept? Is it feasible? Do we have the intellectual property? Are there regulatory or legal barriers?

# WHAT IS BUSINESS INNOVATION?

Organizations today have to work very hard to stay competitive and survive in the marketplace, but just surviving is not good enough.

Companies want to **grow in size and ultimately grow in value** to their share-holders.

The only true, sustainable and virtually unlimited source of new growth for any organization **is innovation.**

# WHY MUST WE INNOVATE?

1. **EMPOWER PEOPLE** TO CREATE, INVENT AND INNOVATE NEW PRODUCTS, PROCESES AND SERVICES.

2. **INCREASING ROI** TO SHARHOLDERS

3. ACHIEVING **BUSINESS GROWTH GOALS** AND IMPROVING RESULTS

4. INCREASING **BUSINESS VALUE** MAKING THE BUSINESS ATTRACTIVE TO SHAREHOLDERS, MERGERS AND ACQUISITIONS

5. COMPETING SUCCESSFULLY TO RESPOND TO INDUSTRY DISRUPTERS, **INCREASE MARKET SHARE AND EXTEND PRODUCT LIFECYCLES**

6. MAKING PRODUCTIVITY AND EFFICIENCY GAINS TO **INCREASE PROFITABILITY**

A.

# INNOVATION STORIES

# “A COMPANY WITHOUT a story is a company without a strategy.” – Ben Horowitz

# WHY STARTUPS WERE SUCCEFULL?

While in very different categories, these startups have been able to do what most large companies haven't — and not just because they're smaller and more nimble.

They're successful because they have an authentic and meaningful story, and they use it to fuel and focus innovation.

Here are their respective stories:

# STARBUCKS

## SUCCESS STORIES

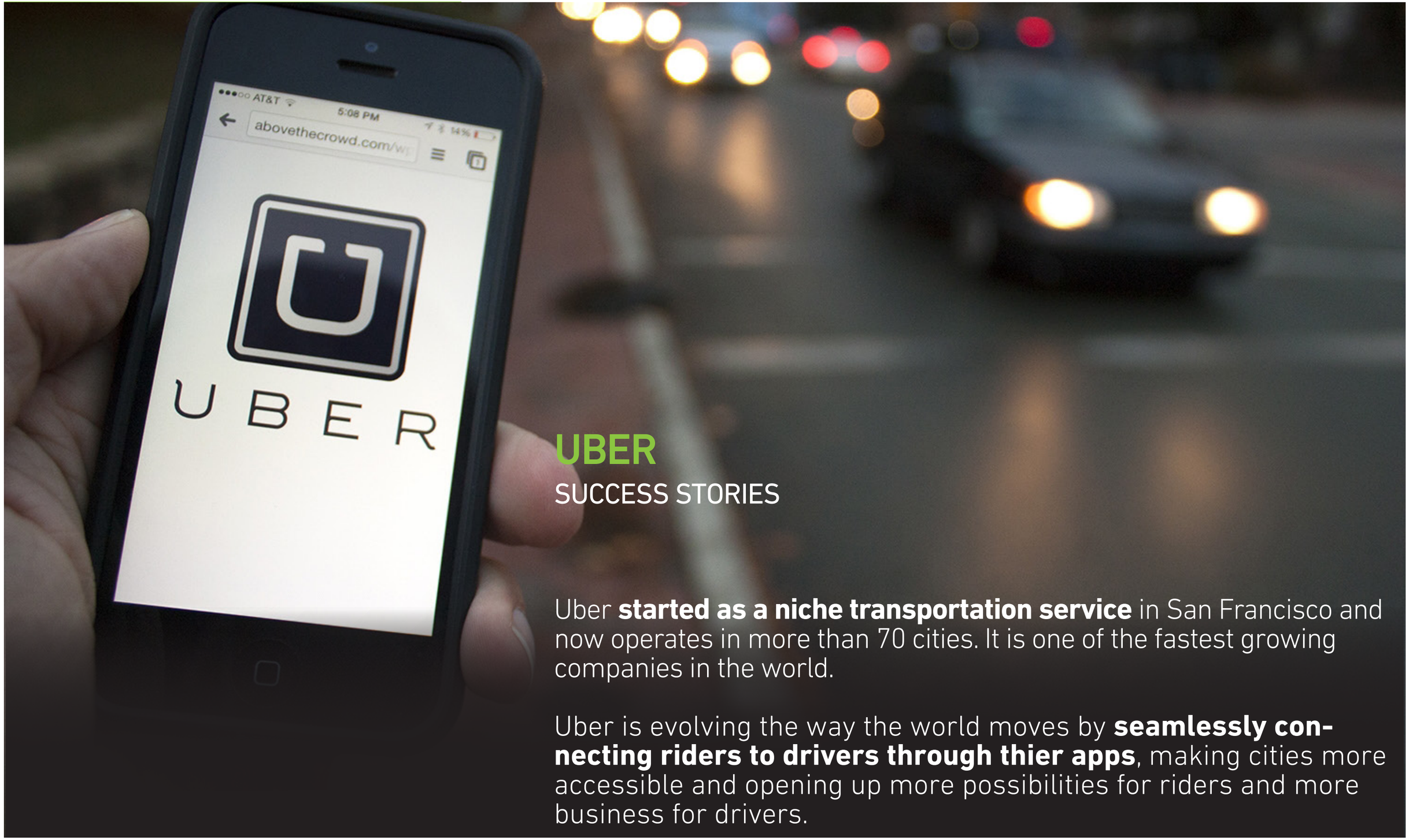
**THE HOWARD SCHULTZ WAY.**

A TRIP TO MILAN GAVE A YOUNG MARKETER WORKING FOR A SEATTLE COFFEE BEAN ROASTER **AN IDEA FOR UPSCALE ESPRESSO CAFES** LIKE THEY HAVE ALL OVER ITALY. HIS EMPLOYER HAD NO INTEREST IN OWNING COFFEE SHOPS BUT AGREED TO FINANCE SCHULTZ'S ENDEAVOR.

THEY EVEN SOLD HIM THEIR BRAND NAME, STARBUCKS.

IN JAPAN IN 1917, A 23-YEAR-OLD APPRENTICE AT THE OSAKA ELECTRIC LIGHT COMPANY WITH NO FORMAL EDUCATION CAME UP WITH AN IMPROVED LIGHT SOCKET. HIS BOSS WASN'T INTERESTED SO YOUNG **MATSUSHITA** STARTED MAKING SAMPLES IN HIS BASEMENT. HE LATER EXPANDED WITH **BATTERY-POWERED BICYCLE LAMPS** AND OTHER **ELECTRONIC PRODUCTS**.

**MATSUSHITA ELECTRIC**, AS IT WAS KNOWN UNTIL 2008 WHEN THE COMPANY OFFICIALLY CHANGED ITS NAME TO PANASONIC, IS NOW WORTH $66 BILLION.




# UBER

## SUCCESS STORIES

Uber **started as a niche transportation service** in San Francisco and now operates in more than 70 cities. It is one of the fastest growing companies in the world.

Uber is evolving the way the world moves by **seamlessly connecting riders to drivers through thier apps**, making cities more accessible and opening up more possibilities for riders and more business for drivers.

# NIKE

## SUCCESS STORIES

NIKE BRINGS INSPIRATION AND IN-NOVATION TO EVERY ATHLETE IN THE WORLD BY **CREATING PHYSICAL AND DIGITAL TOOLS**, EQUIPMENT AND MOTIVATION FOR ATHLETES TO ACHIEVE THEIR TRUE POTENTIAL.

NIKE+ RUNNING APP AND FUELBAND, NIKEID, KINECT TRAINING, FUEL LAB

# FACEBOOK

## SUCCESS STORIES

Created by Mark Zuckerberg the youngest billionaire on the planet who created the Facebook social network that now has 1 billion monthly active users.

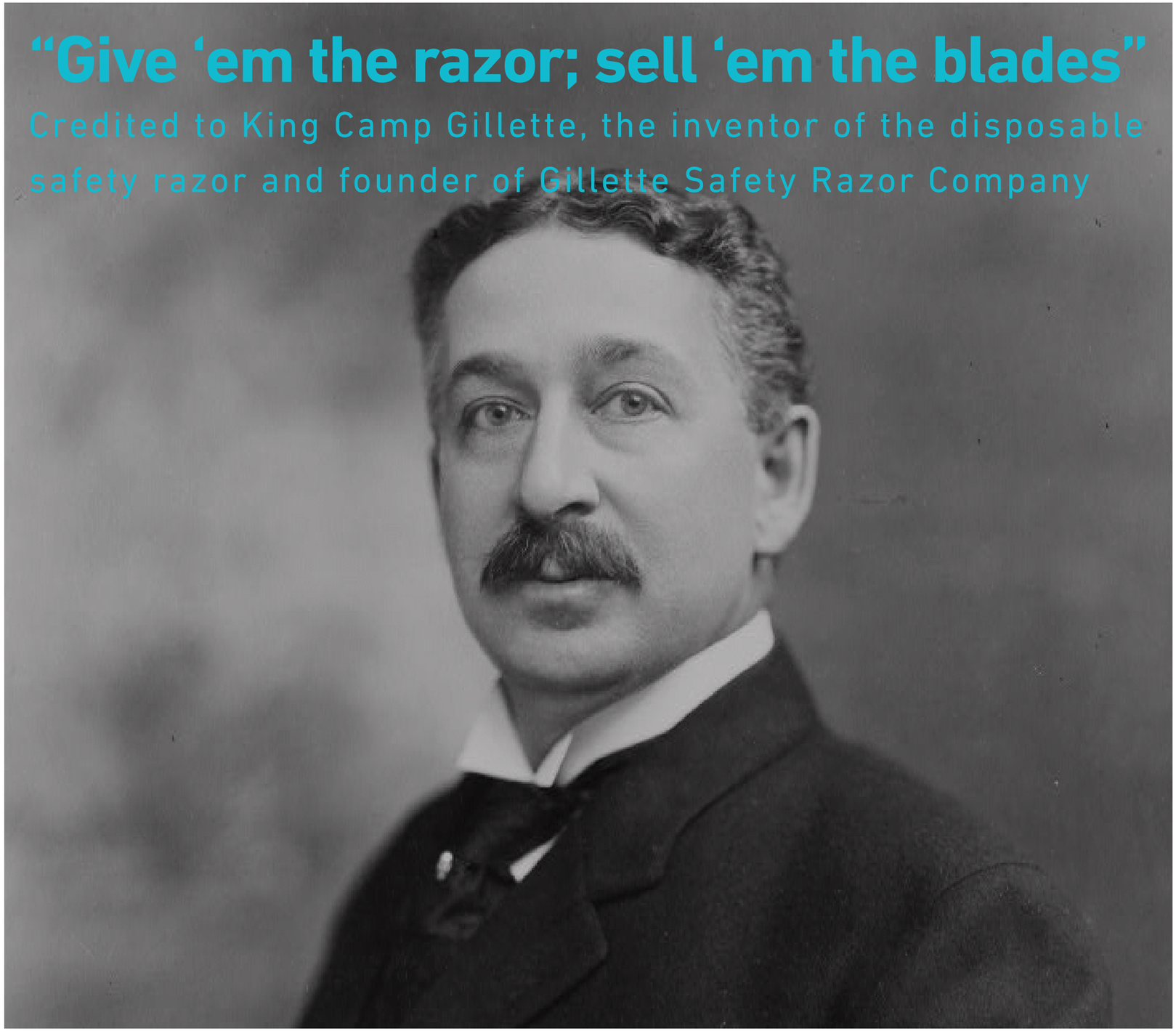
# GELLETTE

## SUCCESS STORIES

He invented a best selling version of the safety razor.

Gillette's innovation was the thin, inexpensive, disposable blade of stamped steel.

Gillette is widely credited with inventing the so-called razor and blades business model, where razors are sold cheaply to increase the market for blades, but in fact he only adopted this model after his competitors did.



# COCO-CHANEL

## SUCCESS STORIES

- Coco began making and selling her hats
- She started sewing dresses of jersey fabric
- She created a style that had been previously unthinkable for women – tracksuits
- Started her perfume line
- She invented the famous “little black dress”
- In her early 20’s, she got involved in jewelry design

# Explore 168 projects

**The Ollie Chair: Shape-Shifting Seating**

RockPaperRobot

Space-saving! Lumbar-supporting! Weather-resisting! Personality-enhancing! Mechanically-marveling! The superhero of chairs.

Brooklyn, NY

| 49% | $39,652 | 28 |
|---|---|---|
| funded | pledged | days to go |

**AIR-INK: The world's first ink made out of air pollution**

Graviky Labs

At the MIT Media Lab, we invented a device that captures air pollution. We turned this pollution into safe, high-quality ink for art.

Singapore, Singapore

| 225% | S$ 31,560 | 8 |
|---|---|---|
| funded | pledged | days to go |

Schuhleister: Customized Shoes Via Industry 4.0

Transforming mass shoe production by combining 3D Technology with traditional hand-craftsmanship. 100% fit 100% your style.

by Moses Jame and 60 backers

Vi. The First True Artificial Intelligence Personal Trainer

Meet Vi, an AI personal trainer who lives in biosensing earphones. She finds your ideal path to fitness and coaches you in real time.

by LifeBEAM and 7,257 backers

Octopus by Joy, the training wheels for good habits!

Solowheel Iota: A Mini Personal E-Vehicle

Nebia Shower - Better experience, 70% less water

OSSIC X: The first 3D audio headphones calibrated to

# LET'S MEET SOME INNOVATORS

# ISLAMIC SCOLARS CHANGED OUR WORLD!

Ibn al-Haytham
**The foundations of optics**

Sulaiman Almahri
**Astronomical Navigation**

## HASSAN ALBALAWI

### EEG CAP ANALYZER - WAKECAP

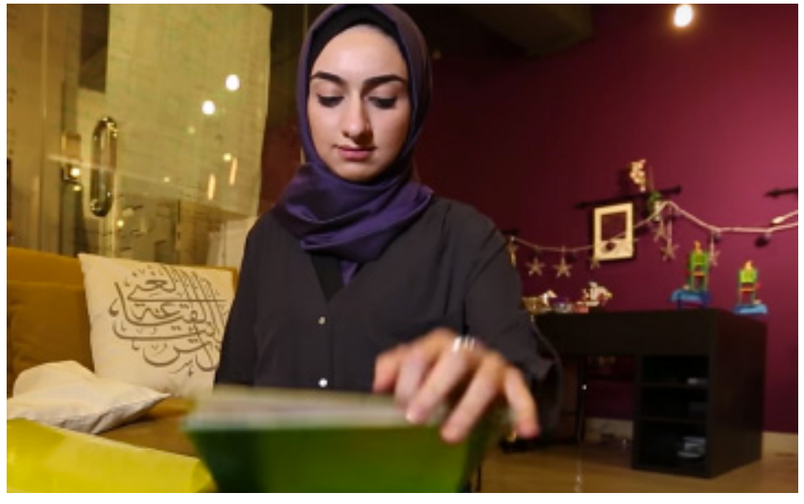
The Kingdom of Saudi Arabia's Hassan Albalawi has remained true to his mantra throughout the season - "**when I face a problem, I don't sleep until I solve it."** Hassan has worked relentlessly to perfect his 'EEG Cap Analyzer', named **Wakecap,** a device worn on the head that detects and warns of drowsiness. As a competitor, he has used the knowledge gained through his PhD studies in Electrical Engineering as well as everyday experiences as a source for inspiration. Hassan is passionate and driven to prove that the Arab world can be a hub for innovation once more.

## RAGHAD ALTHUBAITI

### RECOGLASSES

A Saudi team of female Saudi students, "Team Extreme", and its 18 year-old mentor recently received top awards at the 20th For Inspiration and Recognition of Science and Technology (FIRST) Championship in St. Louis, Missouri in the United States.

In a competition in which contestants were required to produce a biomedical robotic project addressing severe injuries or genetic diseases, the Saudi team produced **RecoGlasses**, designed to enable Alzheimer's patients to better identify friends and relatives.



## SAJA ALMUZAINI

### THE MAGNIFICENT ELEPHANT CLOCK

Coming across **AlJazri's Elephant clock** and exploring the Golden Age in the Muslim world. Saja founded Qirtas, to shed light on the greatest inventions of this of the Golden Age. We don't do this by telling you about them, but by allowing you to own and tinker with them directly!**.** Islamic civilization was at its peak in progress and prosperity in the various fields of science, industry, arts and literature. **"There is so much that we can learn by reconnecting with that time."**

A.

# WHERE DOES GOOD IDEAS COME FROM?

# METHODS OF GENERATING IDEAS

Method of generating ideas called Systematic Inventive Thinking, or SIT

With SIT, innovation follows a set of patterns that can be reapplied to any product, service, or process.

It is a practical approach to **creativity, innovation and problem solving**

They regulate your thinking so that you can innovate in a systematic way on demand.

# 1.SUBTRACTION

## Systematic Inventive Thinking, or SIT

The **elimination of core components** rather than an addition of new systems and functions.

A part of the umbrella is transparent to allow the user to see where they are going.

# MULTIPLICATION

## Systematic Inventive Thinking, or SIT

Multiplication of elements **already existing in the product along with a required change.**

It is not creative rather than it **improve performance.**

Gillette multiplied the razor blade of a straight edge razor to create the Shaving System. The copied component is different in its location and function.

# TASK UNIFICATION

## Systematic Inventive Thinking, or SIT

The assignment of **new tasks to an existing resource.**

Rumor has it that Thomas had attached a pump to his gate, so that every time somebody opened or closed it, they were pumping fresh water into the plumbing system of the house.

# DIVISION

## Systematic Inventive Thinking, or SIT

**Dividing a product or its components functionally or physically** and then **rearranging** them back into the product.

The division technique **cuts your biggest challenges** down to size so you can **see new innovative opportunities**.

A clever innovation from designer, Hiroshi Kajimoto. He calls it the **Unbrella**. The stretchers that support the cover have been divided out and placed on top.

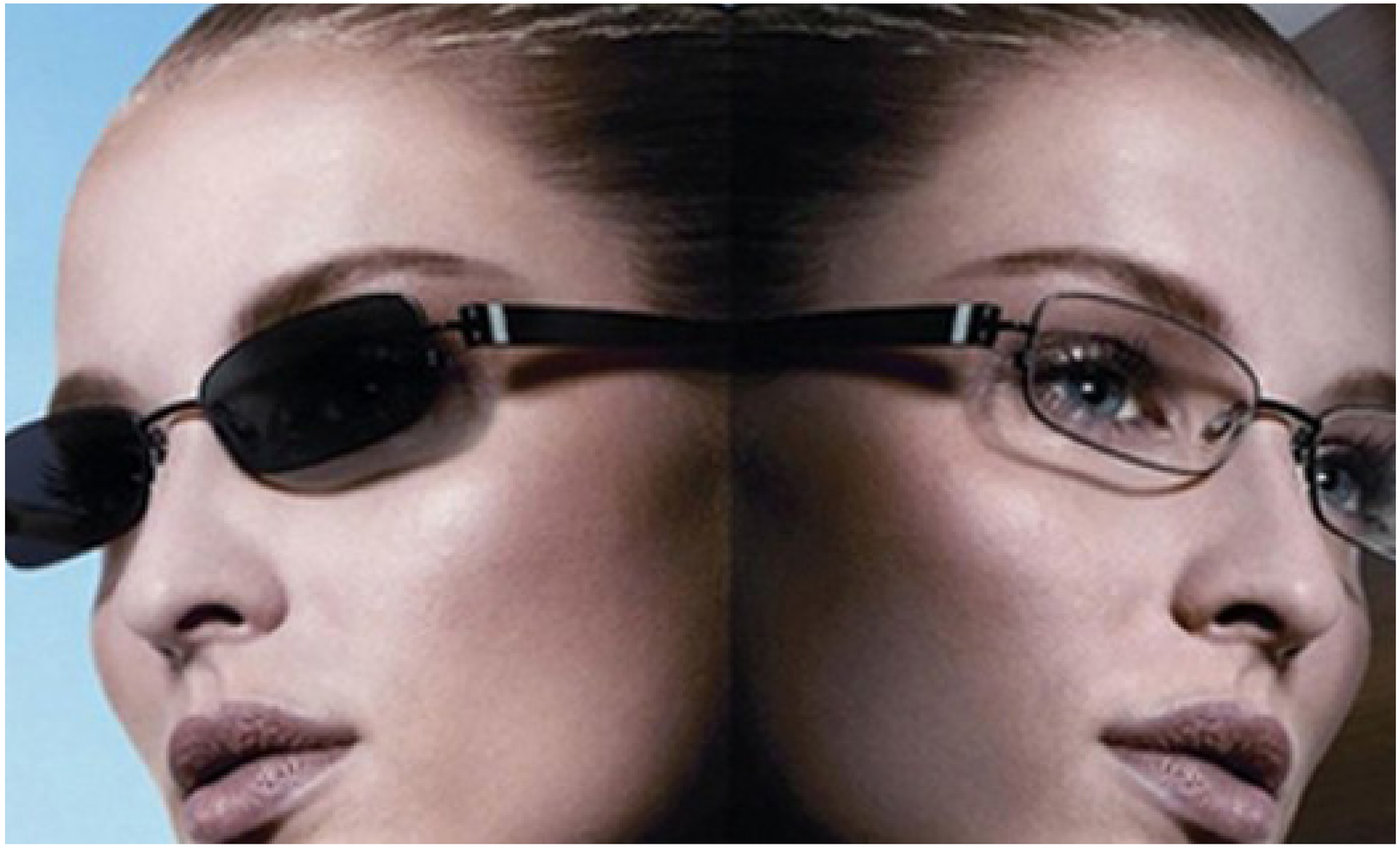
# ATTRIBUTE DEPENDENCY

## Systematic Inventive Thinking, or SIT

The **creation/removal** of symmetries or dependencies between existing product properties.

**As one thing changes, another thing changes.**

Research shows that this technique is the most powerful of the five within systematic, inventive thinking



Transition sunglasses are one of the best examples of dependency.
As the brightness of the light changes, the lens automatically darkens in response to that change.

# 5 STAGES OF THE INNOVATION PROCESS

## 1. IDEA GENERATION

Inspiration for a new idea can originate **from an improvement** of an existing idea, or something **from scratch**.

Apple waited three years after MP3 players were introduced to create the iPod, which was attractive, intuitive and offered capacity for up to 1,000 songs.

Conversely, the invention of Scotch tape was a brand new idea.

## 2. ADVOCACY AND SCREENING

Not all ideas are worth implementing. Advocacy and screening help **evaluate** an idea and **measure** its **potential benefits and problems.**

## 3. EXPERIMENTATION

The experimentation stage **tests an idea**, such as with a prototype or pilot test.

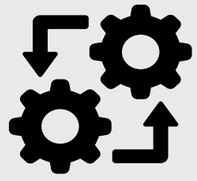
Sometimes, experimentation leads to new ideas due to information that is gathered on the results and the overall feasibility of the original idea.

## 4. COMMERCIALIZATION

Commercialization aims to **create market value** for an idea by focusing on **its potential impact**.

Commercialization is the stage of the innovation process when the focus shifts from development to persuasion. After the idea is clarified and a business plan is created, it will be ready for diffusion and implementation.

## 5. DIFFUSION AND IMPLEMENTATION



Diffusion is the companywide **acceptance of an innovative idea**, and **implementation** sets up everything needed to **develop and utilize or produce the innovation.**

B.

# 3 STEPS TO SUCCESS!

# A 3-STEP INNOVATION PROCESS MODEL

## 1- THE SEARCH STEP

THIS IS WHAT MOST PEOPLE WOULD CALL **'INNOVATION'.**

THE SEARCH PHASE REQUIRES A SOLID **UNDERSTANDING OF THE INDUSTRY AND YOUR TARGET CLIENT SEGMENT.**

DOES YOUR IDEA OFFER YOUR COMPANY A SUSTAINABLE COMPETITIVE ADVANTAGE THAT BRINGS IN ENOUGH EARNINGS?

If your current business brings in one billion a year, you won't want to waste your time on ideas with a future earnings potential of 25K. But if you are a higher turnover company, it could be great to pursue this.

As success is not guaranteed, you want to reward effort rather than results. You want to encourage revolutionaries, people who dare to think differently, those individuals that ask questions that others won't.

# A 3-STEP INNOVATION PROCESS MODEL

## 2- INCUBATE

THE SECOND STEP IN THE INNOVATION PROCESS IS ALL ABOUT **TESTING AND GROWING IDEAS.**

INCUBATION DEMANDS **A TRIAL AND ERROR** APPROACH AND MINDSET.

THE AIM OF THE INCUBATION PHASE **IS TO TEST VALUE** – TO FIND OUT IN THE REAL WORLD IF CUSTOMERS ARE WILLING TO PAY FOR A CERTAIN VALUE THAT YOU ARE OFFERING.

ONCE THE TESTING IS FINALIZED, YOU CAN DETAIL A BUSINESS CASE BASED ON REAL DATA, AND NOT ONLY ON WILD GUESSES AND RANDOM ASSUMPTIONS.

# A 3-STEP INNOVATION PROCESS MODEL

## 3- EXECUTE

IN THIS STEP, IT'S ALL ABOUT **GROWING THE IDENTIFIED VALUE OF A SPECIFIC IDEA.**

YOUR TESTS SHOW THAT THE CUSTOMER TARGET GROUP IS WILLING TO PAY FOR THE VALUE OFFERED AND YOUR HONEST BUSINESS CASE INDICATES THAT THE EARNINGS FROM THE IDEA WILL BE LARGE ENOUGH – IN TERMS OF EARNING POTENTIAL COMPARED TO YOUR COMPANY SIZE AND RELATIVE TO OTHER OPTIONS YOU HAVE.

YOUR GOAL IS TO REPRODUCE THE SUCCESS OF THE TEST AND TURN IT INTO A FACTORY APPROACH, A STREAM-LINED DAY-TO-DAY ACTIVITY THAT BRINGS IN THE EXPECTED RETURNS.

THE KEY WORD IS 'STREAMLINING'. YOU WANT TO TURN THIS INTO BUSINESS AS USUAL, A FACTORY THAT GROWS THE VALUE.

## SO WHAT CAN OTHER LARGE COMPANIES DO TO GET BACK IN THE DISRUPTIVE INNOVATION GAME?

### FIRST, THEY MUST DEFINE THEIR STORY

LIKE NIKE, THEY MUST CREATE A CORE NARRATIVE AROUND WHICH THE ENTIRE COMPANY, NOT JUST MARKETING, MAKES DECISIONS.

### SECOND, THEY SHOULD MAKE SURE THEIR STORY DEFINES AN AMBITION BEYOND COMMERCIAL ASPIRATION.

### THIRD, THEY SHOULD USE THEIR STORY TO DRIVE ACTION AND INNOVATION THROUGHOUT THE COMPANY.

# INNOVATION PROCESS MANAGEMENT

THE TWO MOST IMPORTANT INNOVATION PROCESS MANAGEMENT CHALLENGES ARE:

## 1- THE POTENTIAL CONFLICT WITH THE CURRENT BUSINESS MODEL

AND

## 2- THE HUMAN SIDE

# THE BUSINESS MODEL CONFLICT

**1. CANNIBALIZATION OF OLD BUSINESS BY THE NEW IDEA:**

FOR EXAMPLE, A NEW E-SHOP KEEPS CLIENTS AWAY FROM TRADITIONAL STORES.

**2. A BRAND IDENTITY MISMATCH:**

FOR EXAMPLE, THE BRAND ATTRIBUTES THAT YOU REQUIRE TO PUT THE NEW IDEA INTO THE MARKETPLACE ARE TOO HIP AND DON'T FIT WITH THE CURRENT BRAND IDENTITY.

**3. A CULTURE AND VALUES MISMATCH:**

FOR EXAMPLE, THE EYE FOR DETAIL AND ENGINEERING YOU CHERISH FOR YOUR MAIN BUSINESS IS OPPOSITE TO WHAT YOU NEED FOR THE B BRAND YOU LAUNCH.

**4. INCENTIVE SYSTEM:**

FOR EXAMPLE, THE REMUNERATION POLICY FOR ATTRACTING AND REWARDING HIGH-QUALITY ENTREPRENEURS DOES NOT FIT WITH THE EXISTING REWARD APPROACH.

# THE HUMAN CONFLICT IN THE INNOVATION PROCESS

**1. “EGO”: THE OBVIOUS THREAT**

A NEW BUSINESS PRESENTS A CLEAR THREAT, ESPECIALLY WHEN IT BECOMES BIGGER. MANAGERS FROM THE EXISTING BUSINESS FEAR THAT THEY WILL LOSE POWER AND INFLUENCE AND START TO TAKE ACTION.

**2. “SIZE”: THE INVISIBLE THREAT**

SOME OF THE MOST IMPORTANT STRATEGIC DECISIONS WILL NEED TO BE MADE DURING THE INCUBATION PERIOD, A TIME WHEN BUSINESS VOLUMES WILL BE 0 OR VERY SMALL.

## LESSONS FOR SMALL BUSINESS OWNERS!

Small companies should realize that their **close customer connection** provides a great springboard for innovation.

**A customer problem is an opportunity to sell that customer another solution.** They are responsive, iterative and flexible.

# LESSONS FOR SMALL BUSINESS OWNERS!

**Understanding your customers** is required for **successful innovation.**

Small-business owners, with their intimate knowledge of their customers, actually are incredibly well-positioned to innovate.

In fact, iPod wasn't Apple's sole reason for success in the digital music space. This innovation went well beyond the technology.

Apple understood that some customers wanted to buy MP3s, not steal them. Thus the combination of iTunes with the slick iPod device proved a winning business model that upended digital music.

# THANK YOU

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