SAMSUNG

TABLE OF CONTENTS

SAMSUNG

HISTORY

TODAY

TOMORROW

SAMSUNG'S HISTORY

1938
1969

STEREO RECEIVER

1972

CASSETTE PLAYER

1974

AIR CONDITIONER

1974

REFRIGERATOR

1974

LAUNDRY MACHINE

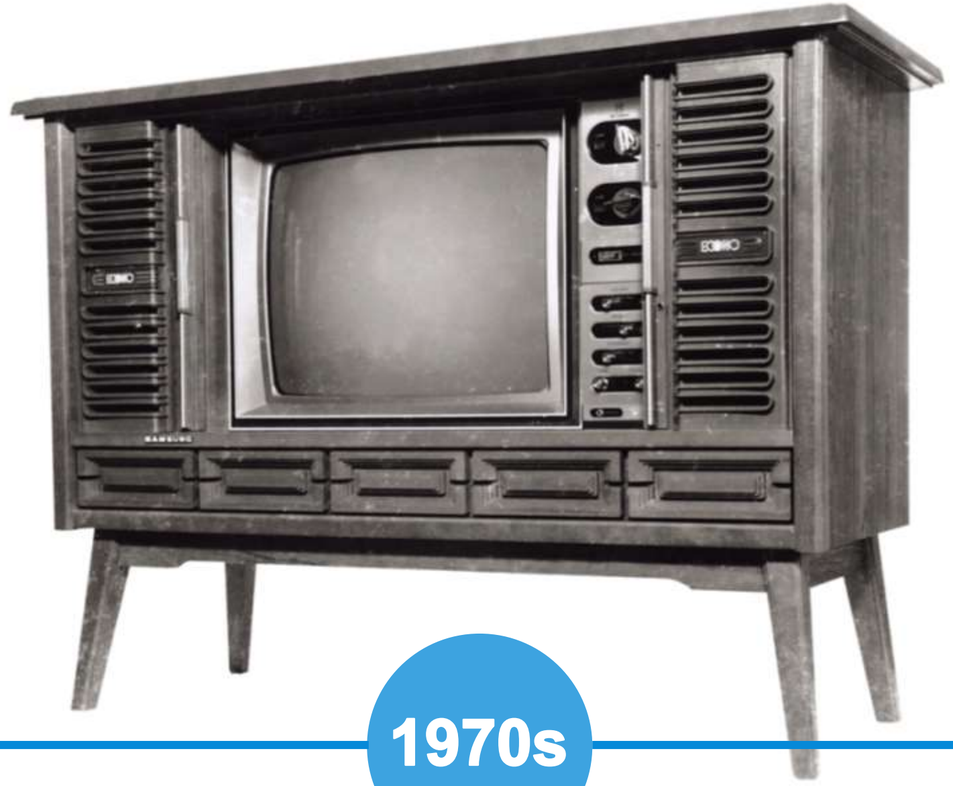
1974

VCR

1979

FILM CAMERA

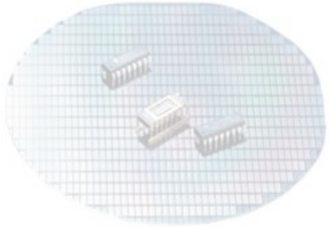
1979



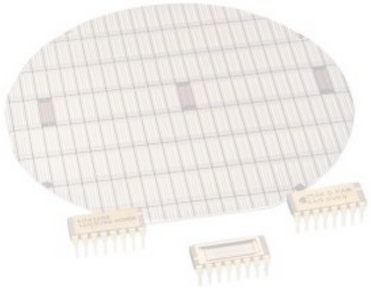
1970s

CONTINUED INNOVATION

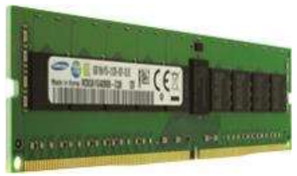
1980s



64Kb DRAM
1983



256Kb DRAM
1994



8Gb DDR4 DRAM

PORTABLE SSD

14nm
APPLICATION
PROCESSOR

1990s

COLOR TV
1980

DIGITAL TV
1998

THE ROME
LCD TV

THE
BORDEAUX
LCD TV

THE
CRYSTAL
ROSE LCD
TV

CHANGE EVERYTHING
1993

WORLD'S FIRSTS MOBILE

1999 — MP3 Mobile

2002 — Mobile with Color LCD

2003 — Mobile with Front-facing Camera

2005 — Satellite DMB Handset

2011 — Smartphone with 4G LTE

2013 — Smartphone with Curved Display

2014 — Wearable device with curved Super AMOLED® display

2014 — Smartphone with Curved Edge Screen

WORLD'S FIRSTS TV

1998

DIGITAL TV

2009

LED TV

2010

SMART TV

2011

Slimmest
LED TV

2013

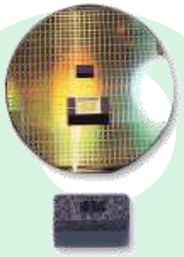
Curved
OLED TV

2014

BENDABLE TV

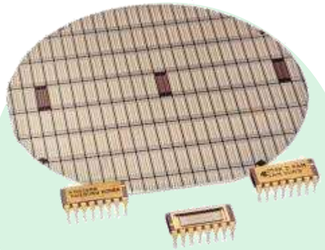
WORLD'S FIRSTS COMPONENTS

1992



64Mb DRAM

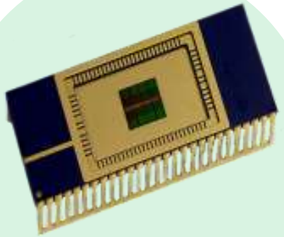
1994



256Mb DRAM

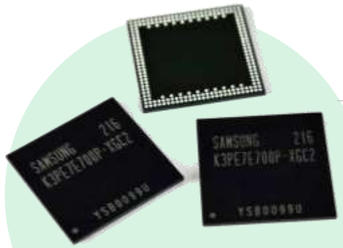
2006

SSD for PCs



1Gb DRAM

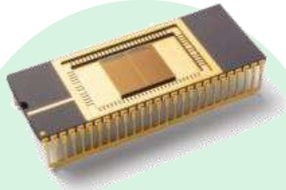
2012



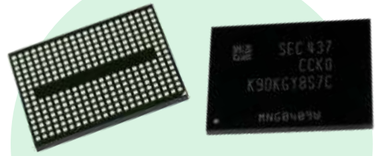
4Gb LPDDR2 Mobile DRAM

Octa-Core Application Processor

2013



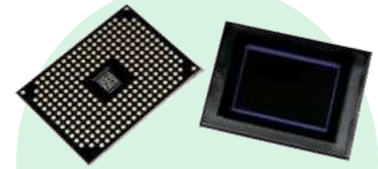
Production of 3D Vertical NAND Flash Memory



3-bit V-NAND Flash Memory

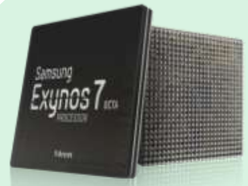
2014

64GB 3D TSV DDR4



28MP APS-C CMOS Image Sensor

2015



14-Nanometer FinFET

BUSINESS PORTFOLIO

Visual Display

Mobile Communications

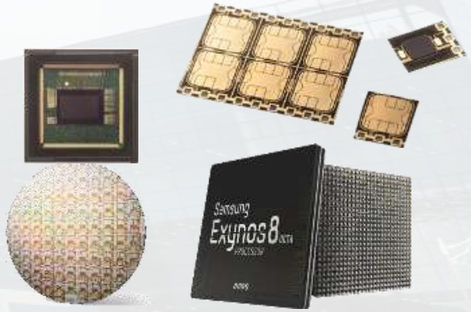
Memory

Health & Medical Equipment

Digital Appliances

Networks

System LSI



2017

MARKET LEADER

#1

MARKET SHARE

TV

—Display Search

Smartphone

—Strategy Analytics

Refrigerator

—GFK/Traqline

Total Mobile Phones

—Strategy Analytics

Digital Signage

—IHS

Memory (DRAM, NAND, SSD)

—IHS iSuppli

Statistics: 2015

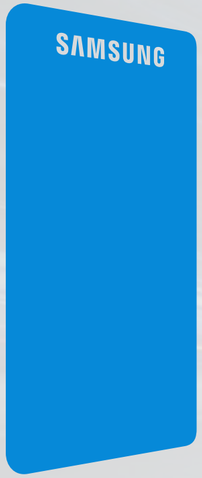
SAMSUNG

MARKET LEADER

Every **HOUR**,

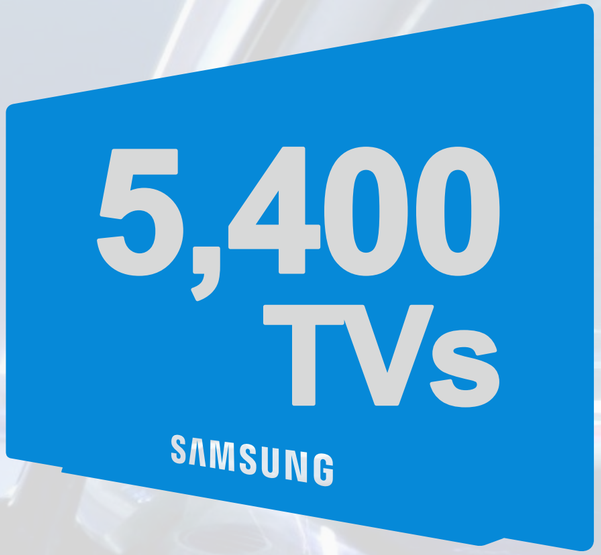
01:00

Samsung sells over:



44,000 MOBILE PHONES

5,400 TVs



Statistics: 2015

* Calculation based on statistics from Strategy Analytics (mobile) and Display Search (flat panel TV)

SAMSUNG

PATENT LEADERSHIP

Patent Holder in the US

SINCE 2006

5,072

New Patents at the U.S. Patent & Trade Office

IN 2015

Patent Holder in Europe

IN 2015

2,366

New Patents at the European Patent Office

IN 2015

4G (LTE)

Declared the Most Patent Applications in ETSI for 4G (LTE)

Statistics: US Patent & Trade Office
European Patent Office

SAMSUNG

SAMSUNG

INNOVATION PILLARS

Research & Development

We push **boundaries of science and technology** and explore **lifestyle trends**.

Design

“Inspired by **humans**, creating the **future**” is our design philosophy

Open Innovation

From **Open Innovation** with worldwide partners and startups to pioneering in-house **research**.

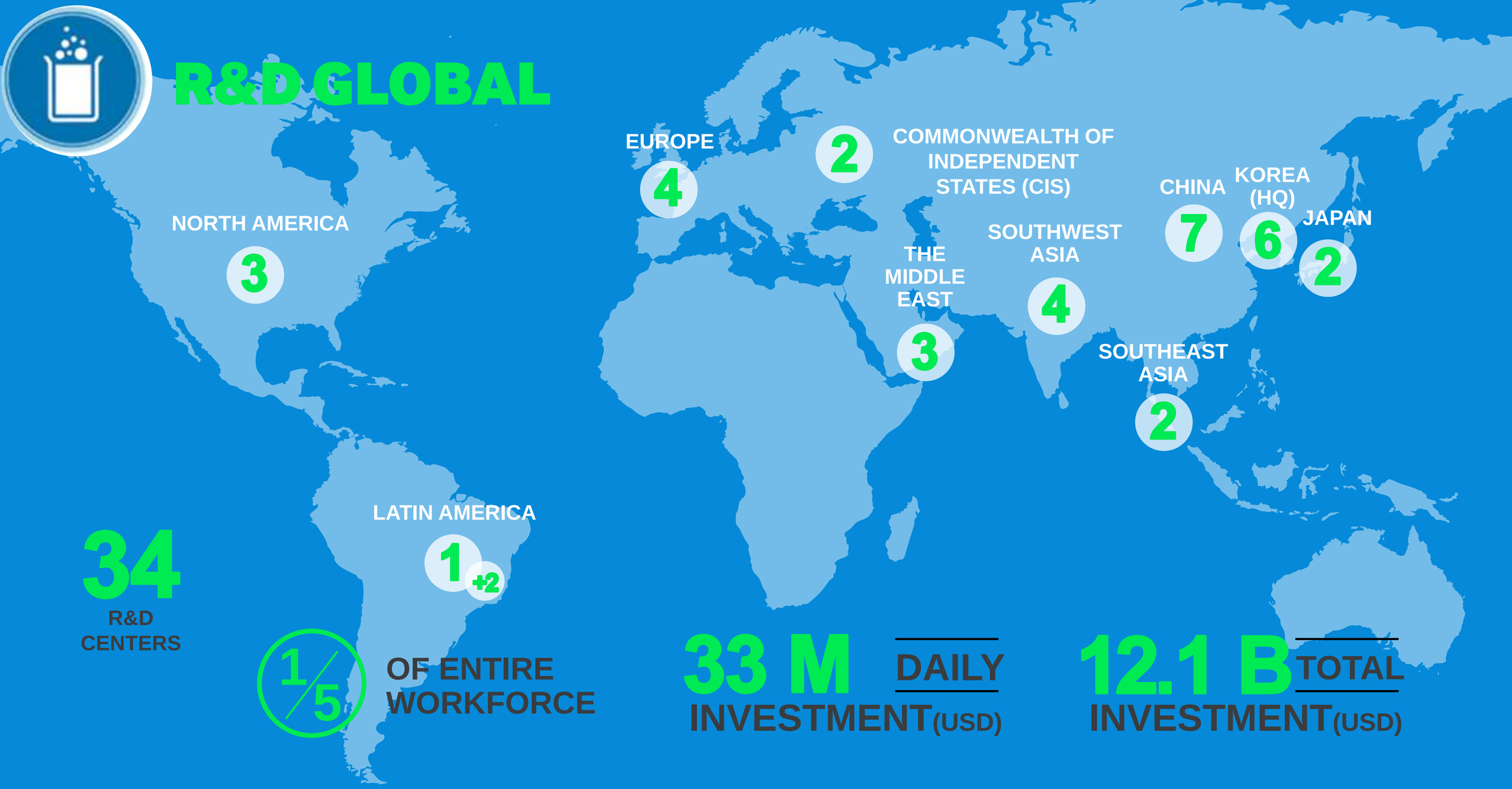
Innovation Outcomes

We’re proud of our history of many pioneering and breakthrough ‘**World First**’ moments.

2016 LA Office – Business Innovation – Strictly Confidential

Source: Samsung PR Messaging Book

R&D GLOBAL



34
R&D CENTERS

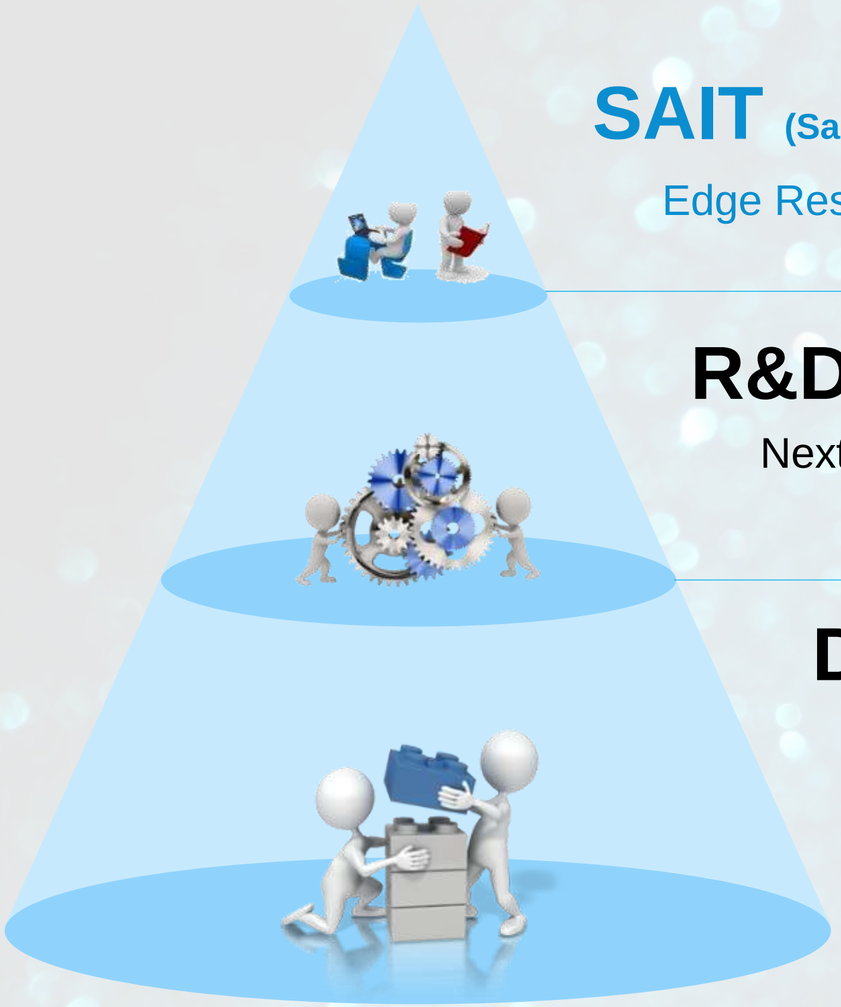
1/5
OF ENTIRE WORKFORCE

33 M DAILY
INVESTMENT(USD)

12.1 B TOTAL
INVESTMENT(USD)

Statistics: 2015

GLOBAL R&D



SAIT (Samsung Advanced Institute of Technology)

Edge Research and New Business Creation
5 to 10 years

Metamaterials

R&D Center

Next Generation Products & Platforms
2 to 5 years

Intelligence

Development Team

Products Development
1 to 2 years

Security

Media Standards

System Optimization

ADVANCED TECHNOLOGY

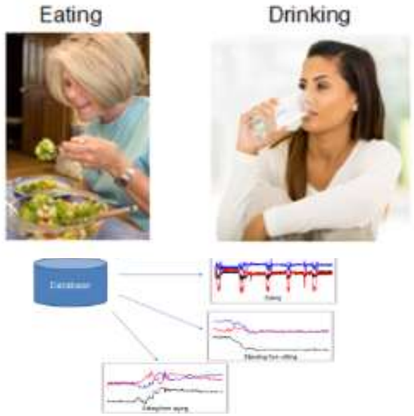
SECURITY

Mobile Security

Smart TV Security

IoT Security

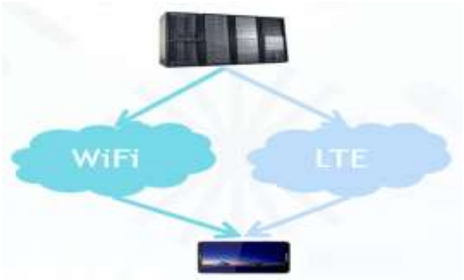
INTELLIGENCE



Human Activity Recognition

Sensitive Media Analysis

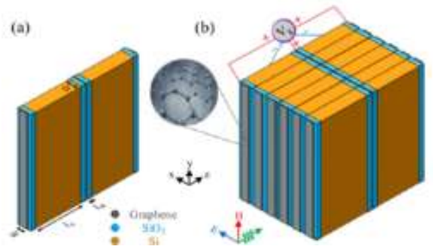
MEDIA STANDARDS



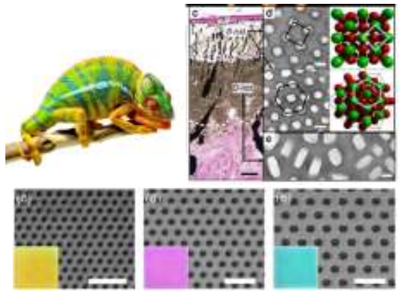
Video Streaming

Light-fields Compression

METAMATERIALS



mmWave Active Lens



Active Wavelength Filtering

SYSTEM OPTIMIZATION

Multicore CPU & GPU Optimization

Energy Management

ENTREPRENOURSHIP

SAMSUNG

Entrepreneurship

OCEAN | SAMSUNG

{StartUp} #2 Economia Criativa

Powered by SAMSUNG & ANPROTEC

2014

2016

SEUL
MANAUS
SÃO PAULO

THE OCEAN

SAMSUNG USERS NEW RELEVANT CONTENT AND SERVICES

CAPACITATION	SOLUTION DEVELOPMENT	PARTNERSHIP
Samsung Technologies Entrepreneurship Usability Open Courses	Apps, Games and Services Cellular, *Wearables*, *Tablets*, SmartTV, IoT Intensive Program others	Universities Enterprises Startups Community Govern Speeches and Events

CAPACITATION AND TRAINING CENTERS FOR DEVELOPERS AND STUDENTS

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PROGRAM

2014

ESTABLISHMENT

São Paulo and Manaus sites setup

Establish local ecosystem relationship

Set strategic partnerships

Impact the higher number of people

2015

MATURITY

Prospect ideas for new Services and Contents

Foster new STARTUPS creation

Guide Community new developments aligned to Samsung business needs

2016

EVOLVEMENT

Review operation model

Getting closer to university centers

Focus on actions for major impact with less effort

2017

INNOVATION

Strength university partnership

Setup Industry verticals initiatives

Foster new STARTUPS creation

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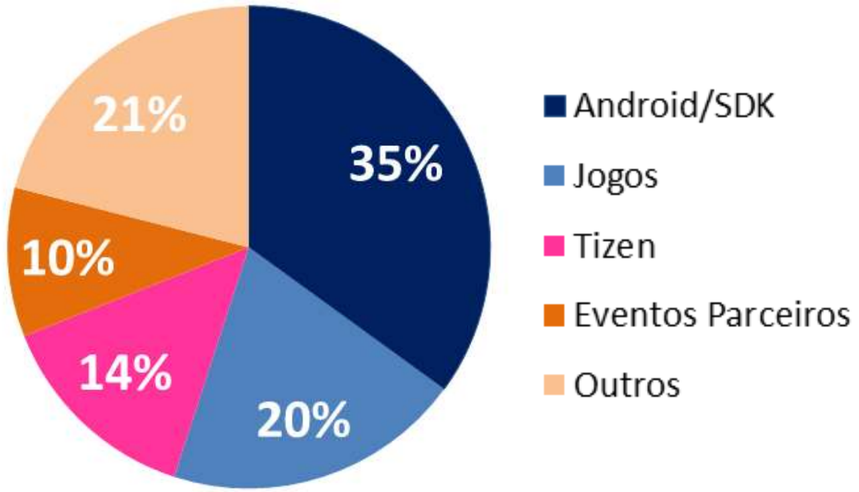
OCEAN IN NUMBERS (2014–2017)

1.9K+	Training Sessions
40K+	Attendees
94%	Relevant Content
91%	Exceed Expectations
150+	Solutions



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SAMSUNG OCEAN

INTENSIVE RESULTS (SP)

- 5 Editions
- 36 STARTUPS
- 17% - INVESTIMENTS/CLIENTS
- PR

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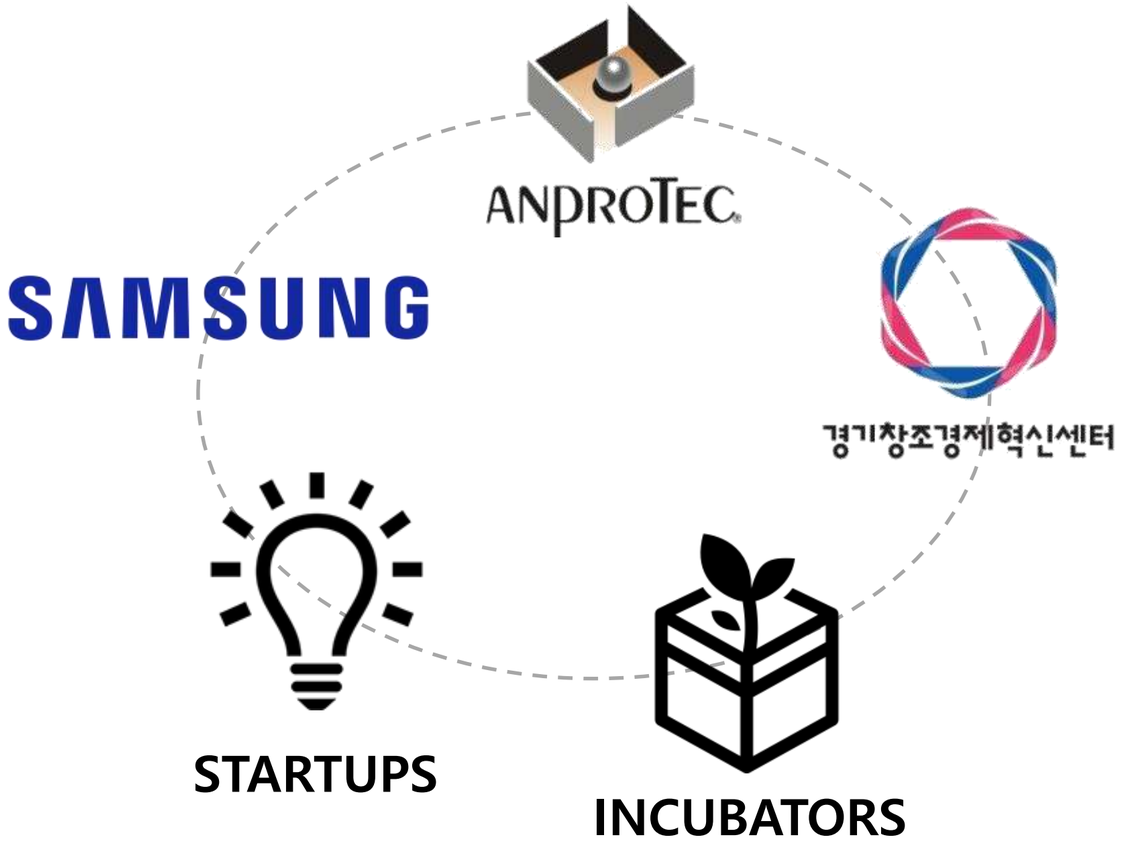
{StartUp}#2 Economia Criativa

Powered by SAMSUNG & ANPROTEC

- STABLISHED STARTUPS
- 12 STARTUPS / 10 INCUBATORS (2nd batch)
- 9 months/ ANUAL
- INVESTIMENT: up to R$ 250 MIL
- NO EQUITY



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http://anprotec.org.br/samsung/

SAMSUNG

{StartUp} #2

Economia Criativa

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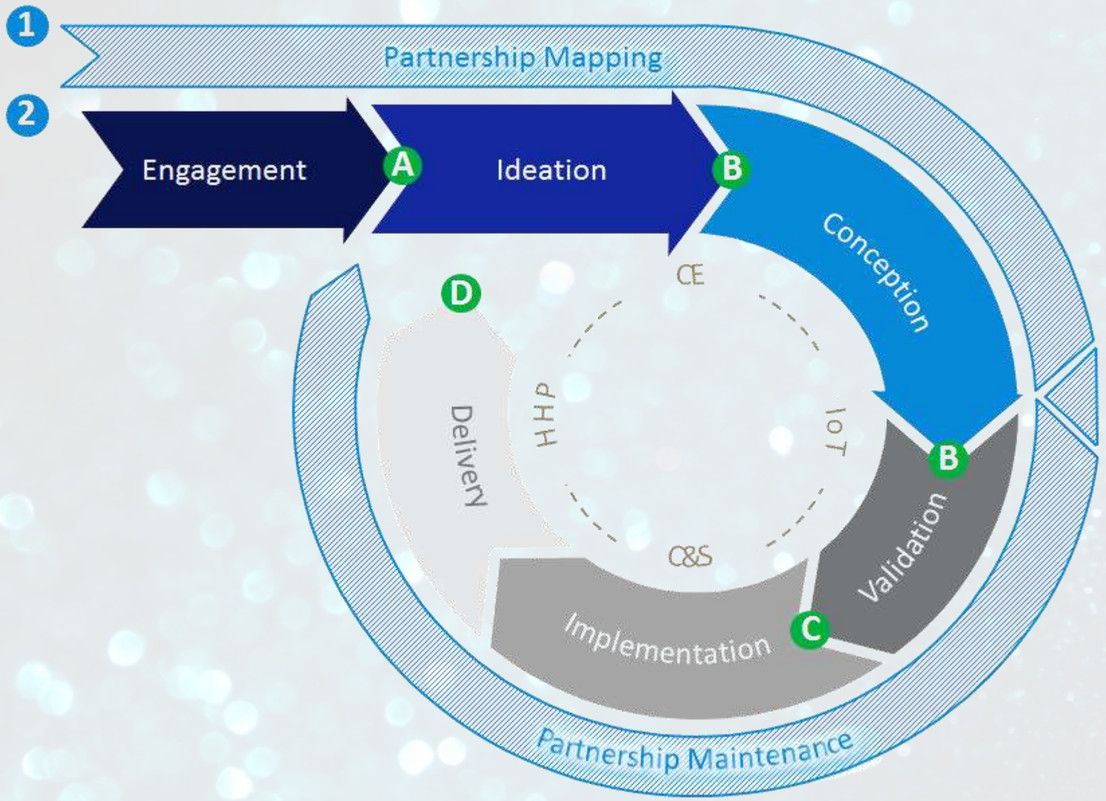
OPEN INNOVATION

SAMSUNG

OPEN INNOVATION



1 Mapping & Maintenance

- Discover potential partners
- Develop partnership strategy
- Reach-out to partners
- Evaluate post-project metrics
- Renew/ Eradicate partnership

2 Engagement

- Engage partners to start project
- State issue and solution
- Conceive solution and test
- Evaluate opportunities for Samsung
- Validade idea
- Launch solution

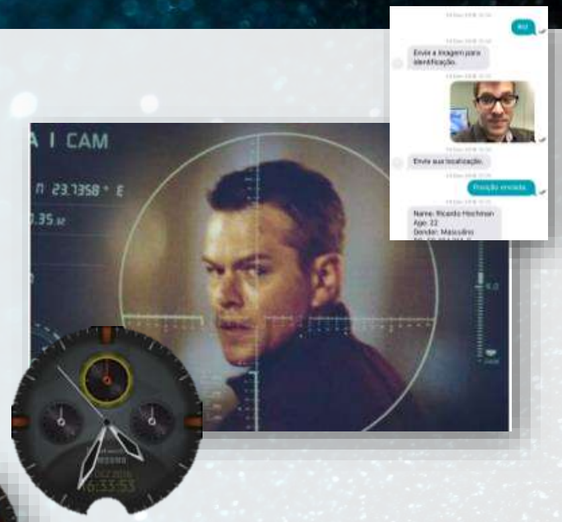
Gates/Checkpoints

- A: NDA
- B: MOU
- C: Bilateral contract
- D: Partnership reevaluation

SAMSUNG

atech

GRUPO EMBRAER



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OBRIGADO!