# Heritage of «Titans», Innovations, Trends, Leadership, Choice

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http://www.concept.ntnu.no/english/

# ASTRAROSSA

DESIGN

# AIM !

## WHAT ARE THE REAL GOALS FOR TOMORROW?

# AIM

# PHILISOPHY

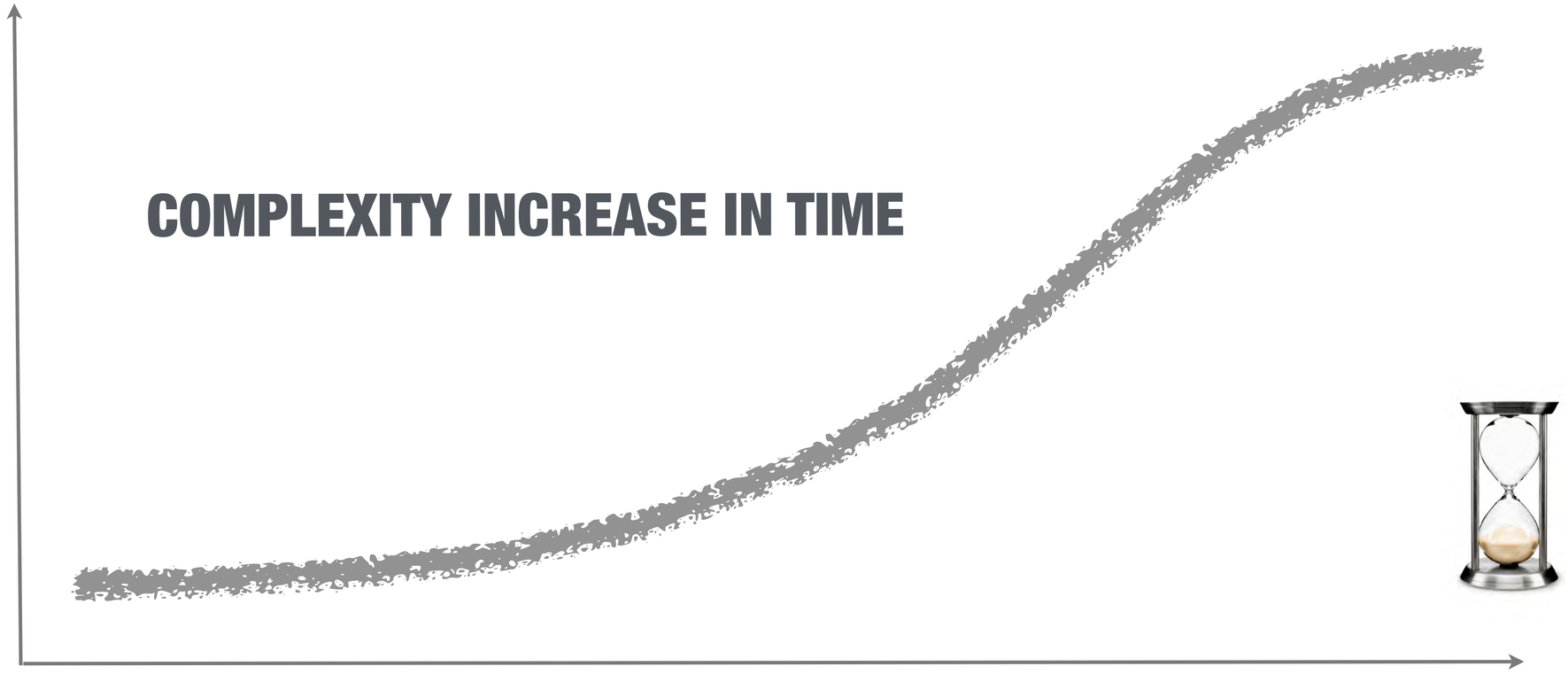
## BASIC VALUES

# PROGRESS
# (MODERNISATION)

# VS

# INNOVATION

# PROGRESS
## (MODERNISATION)



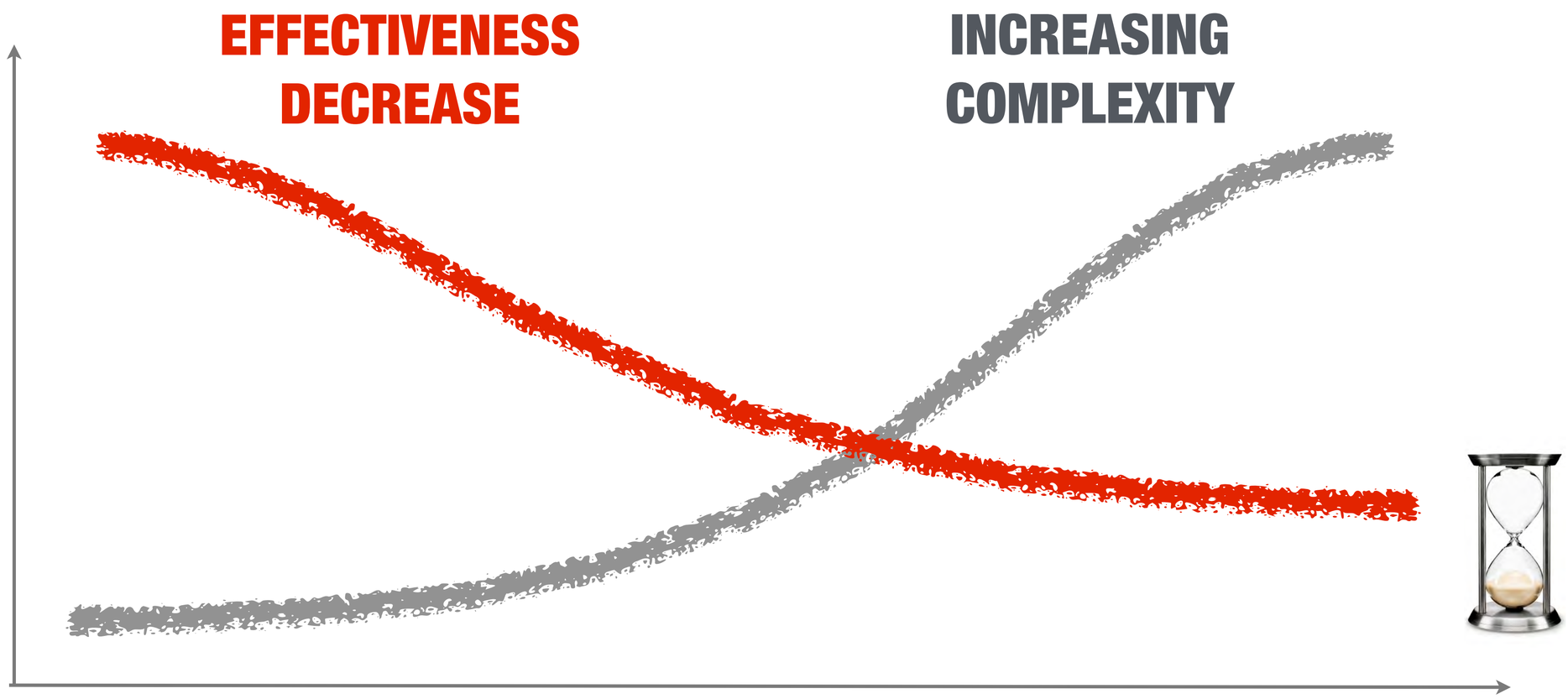
# DESIRABLE & FUNCTIONAL OBJECT

# PROGRESSIVE DEVELOPMENT

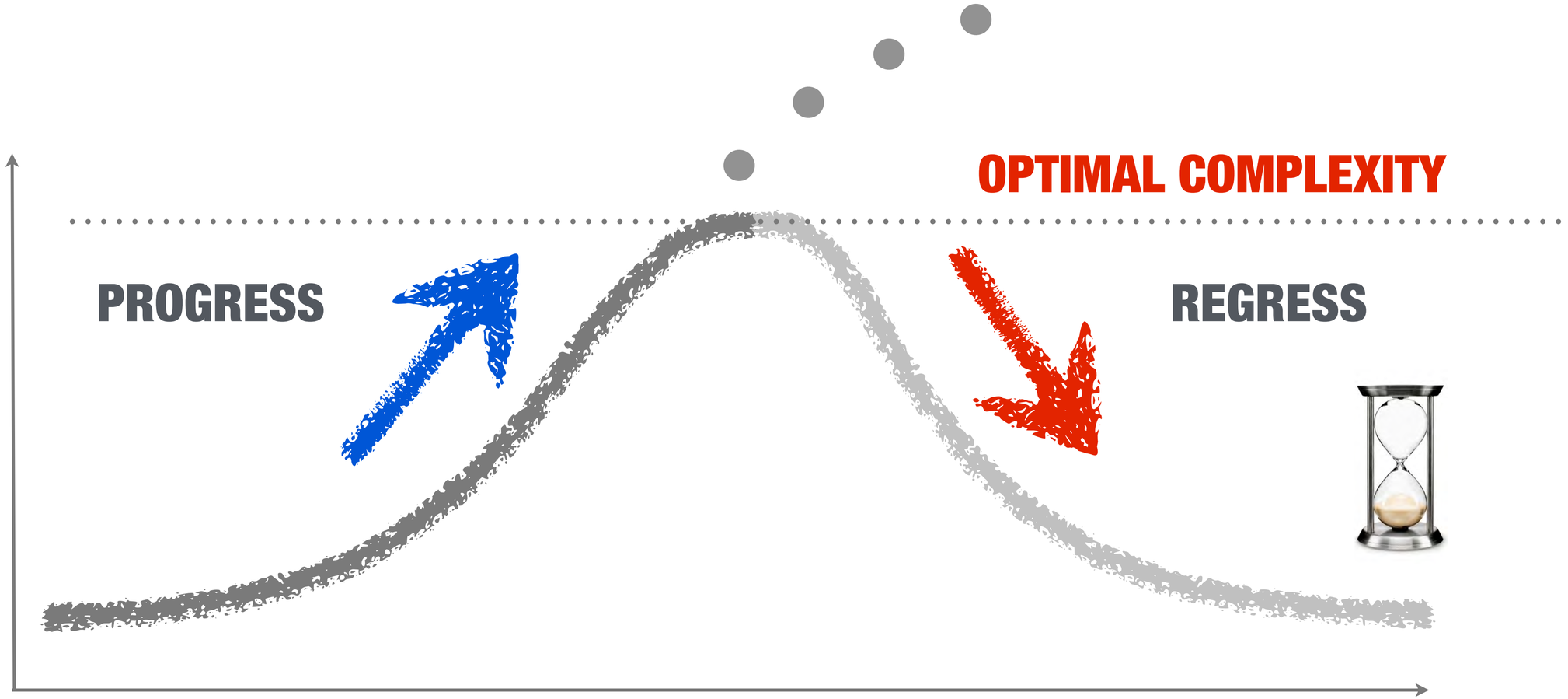
# PROGRESSIVE DEVELOPMENT

# PROGRESSIVE OVER-DEVELOPMENT

# PROGRESS



# PROGRESS HAS A LIMIT

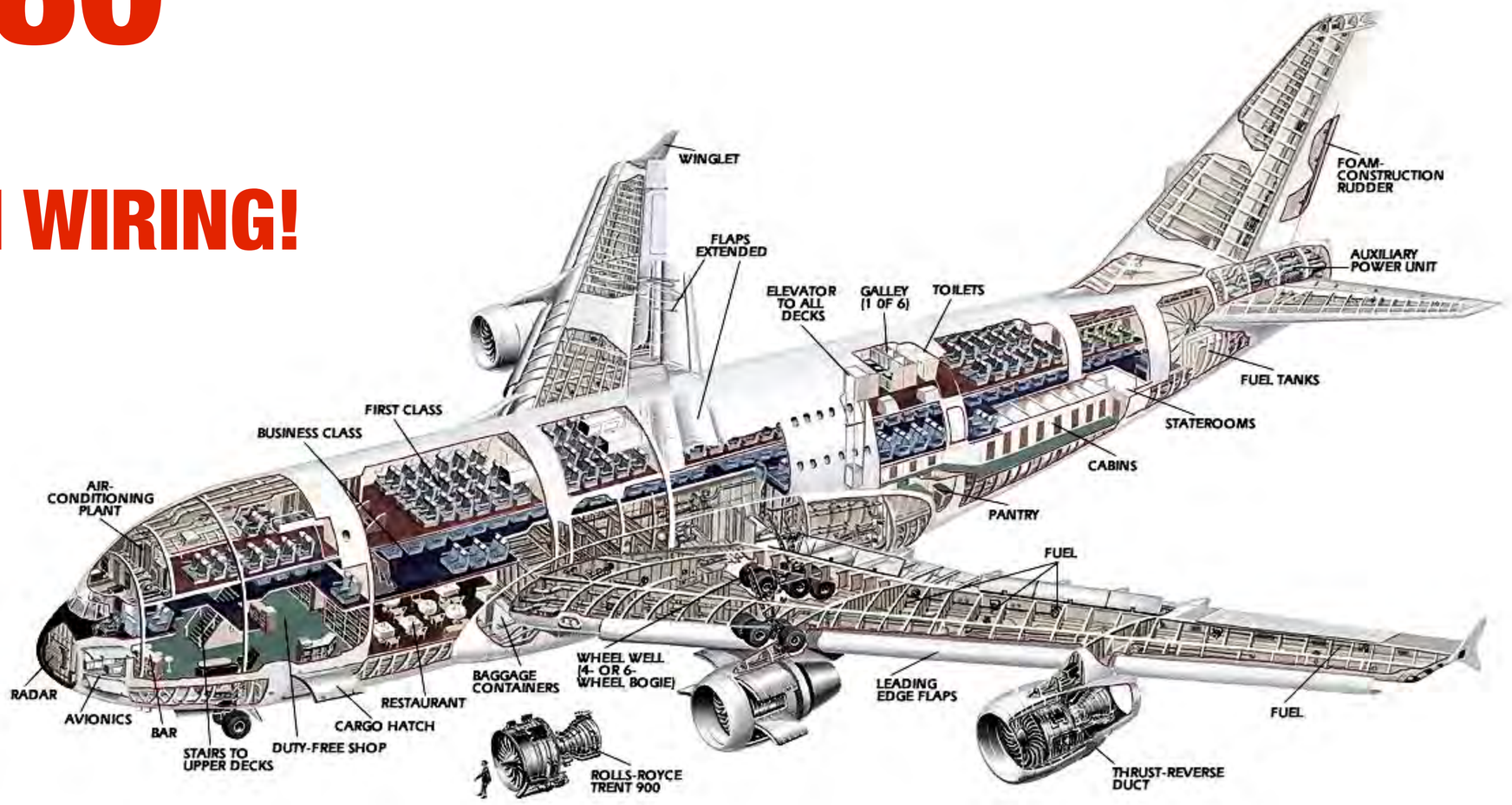


# PROGRESS HAS A COMPLEXITY LIMIT

## HAND SIZE - CONTROL PARAMETRE

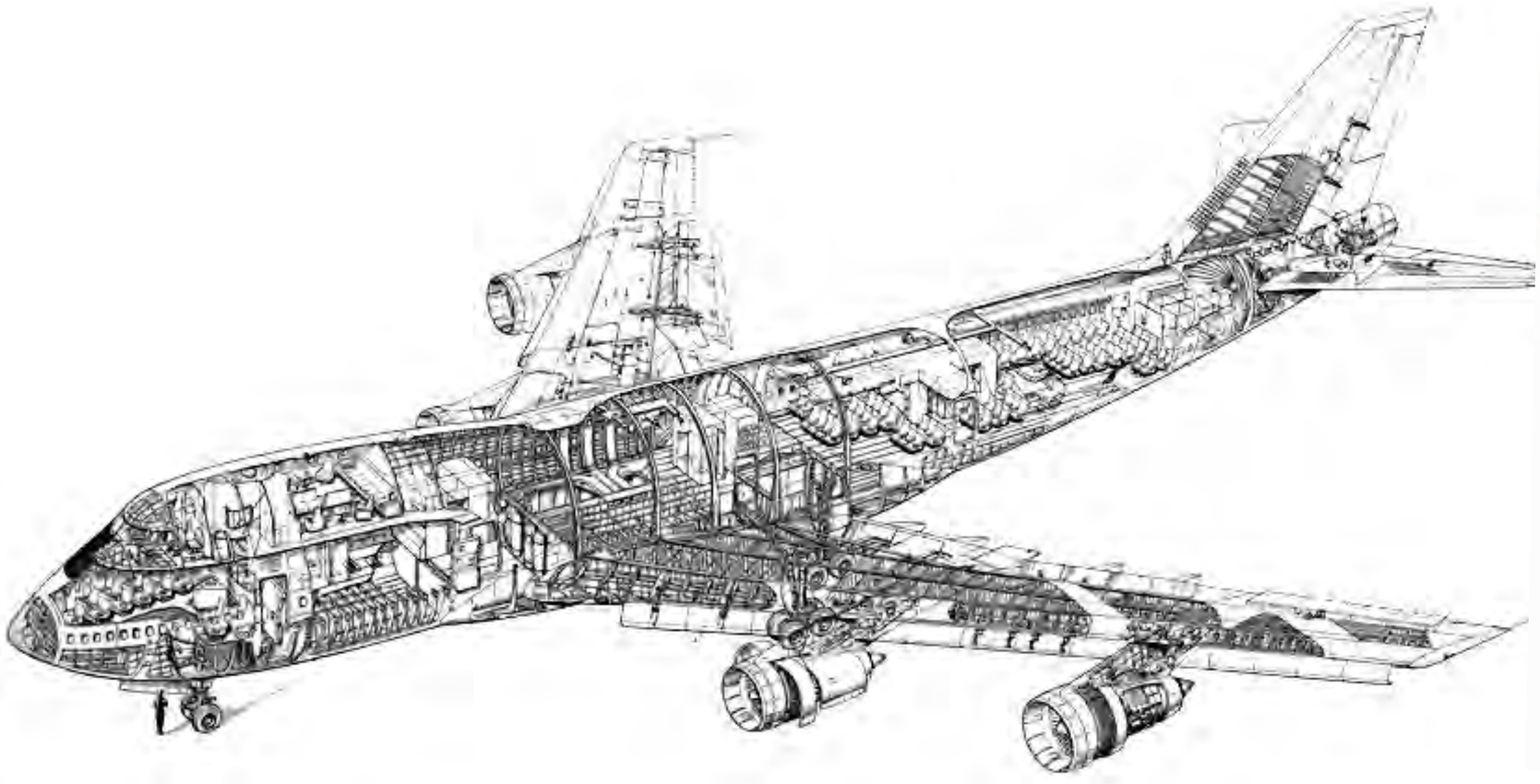
# A-380

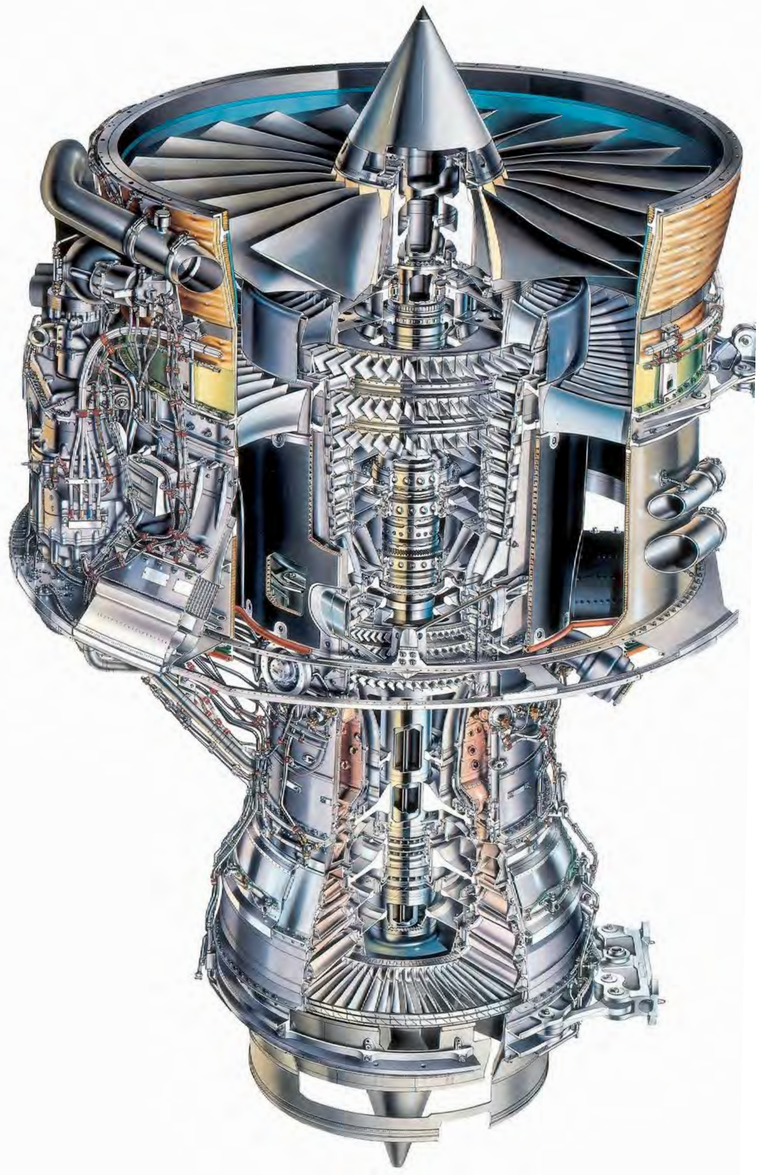
# 700 KM WIRING!



# BOEING 747

# 3.500.000 SERTIFIED PARTS!





# PROGRESS

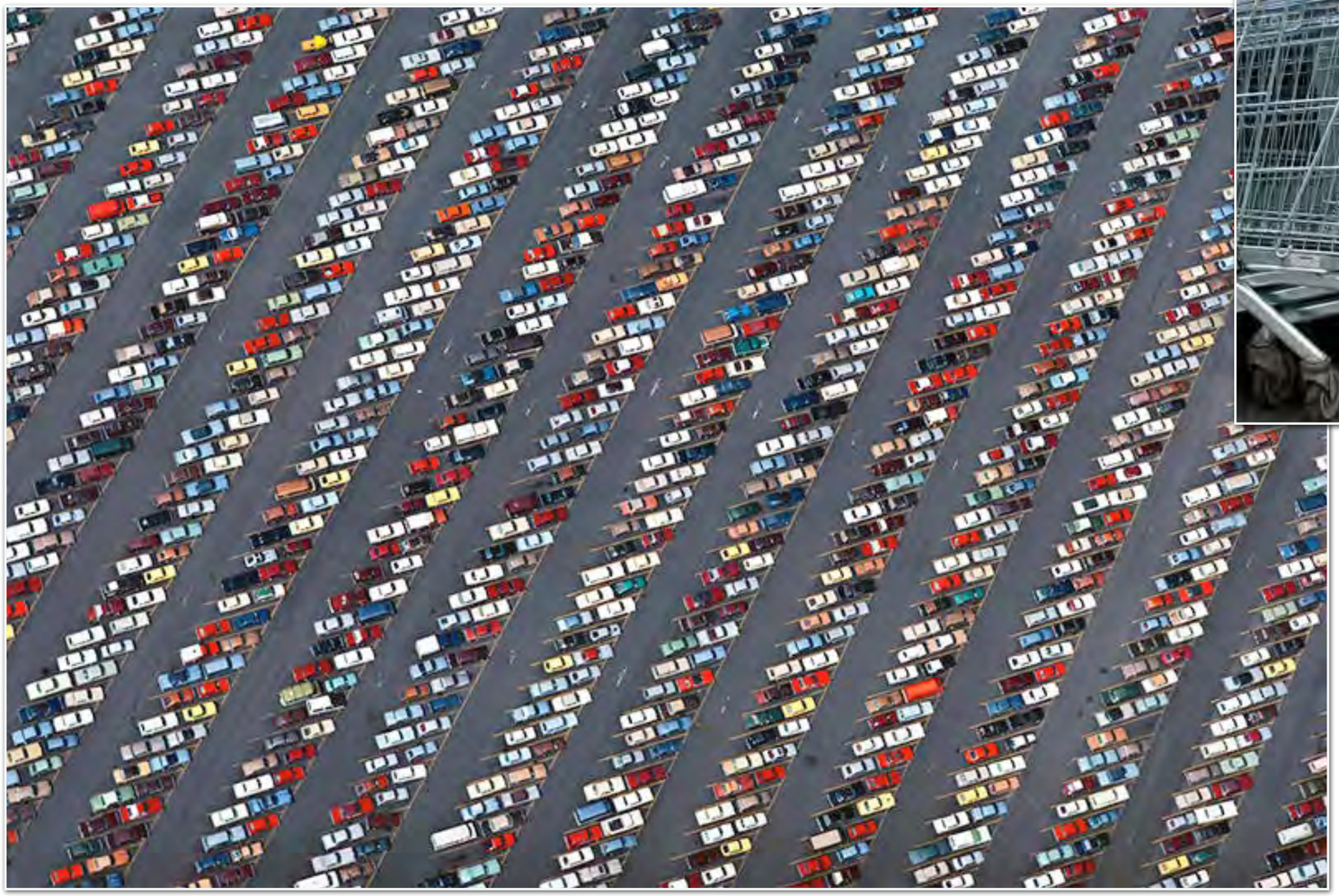

# PROGRESS


居酒屋
本陣
4F
お好み焼
本陣
3F
4F
居酒屋
本陣
4F
お好み焼
本陣
8F
4F
1週間無利息キャッシング
NO LOAN
3F
3F
牛丼
吉野家
YOSHINOYA
24時間営業
PRONTO
CAFFÈ & BAR 1988
MUSIC LIBRARY
MUSIC LIBRARY
集
2-3F ワインと
8F
お好み焼
本陣

# PROGRESS


Чемпионы по Trade-in
730 3434
RANGE ROVER SPORT
ИГРА НА ПОБЕДУ
MOSA MOTORS
785-1111
ЗДАНИЕ свободного назначения
пр-т Мира
2500 м²
ПРОДАЖА
(495)229 35 26

# PROGRESS



# PROGRESS

# PROGRESS


NASDAQ
1658.14
+1.0%
+17.11
FINANCE SECTOR
+0.9%
1,437,626,992
3552.58
+1.1%
+34.77
TELECOMMUNICATIONS SECTOR
+0.4%
+0.68
179.73
NASDAQ COMPOSITE
94.43
+0.9%
S&P 500 Index
1165.69
+11.64
+1.0%
2957.81
+1.8%
+53.46
BANKING SECTOR
2021.77
COMPUTER SECTOR
+0.8%
+6.83
902.63
681.22
DOW JONES INDUSTRIAL AVERAGE
10252.29
+112.17
+1.1%
intel
-0.3%
1994.43
+17.65
+0.9%
1,437,626,992
1479.49
-1.19
-0.1%
UNCH
08:58:39


6764/T 6857/T 6976/T 7013/T 7270/T 7911/T 8015/T 8253/T
三洋電 アドバンテ 太陽電 IHI 富士重 凸版印 豊通商 クレセゾン
164 1631 753 129 418 737 985 1268
-8 -177 -77 -10 -30 -38 -90 -77
6767/T 6902/T 6981/O 7201/T 7701/T 7912/T 8022/T 8267/T
ミツミ デンソー 村田製 日産自 島津製 379 イオン
1830 1960 3670 528 700 -35 1001
-138 -170 -180 -28 -37 -33
6770/T 6952/T 6991/T 7202/T 7741/T 8303/T
アルプス カシオ パナ電工 いすゞ HOYA 新生銀
633 727 792 197 230
-14 -59 -46 -27 -28
6773/T 6954/T 7003/T 7203/T 7733/T
パイオニア ファナック 三井造 トヨタ オリンパス 菱UFJ
523 7000 139 3410 2535 767
-27 -50 -14 -300 -110 -44
6796/T 6963/O 7004/T 7261/T 7751/T
クラリオン ローム 日立造 マツダ キヤノン なHD
97 4460 77 289 3400 11100
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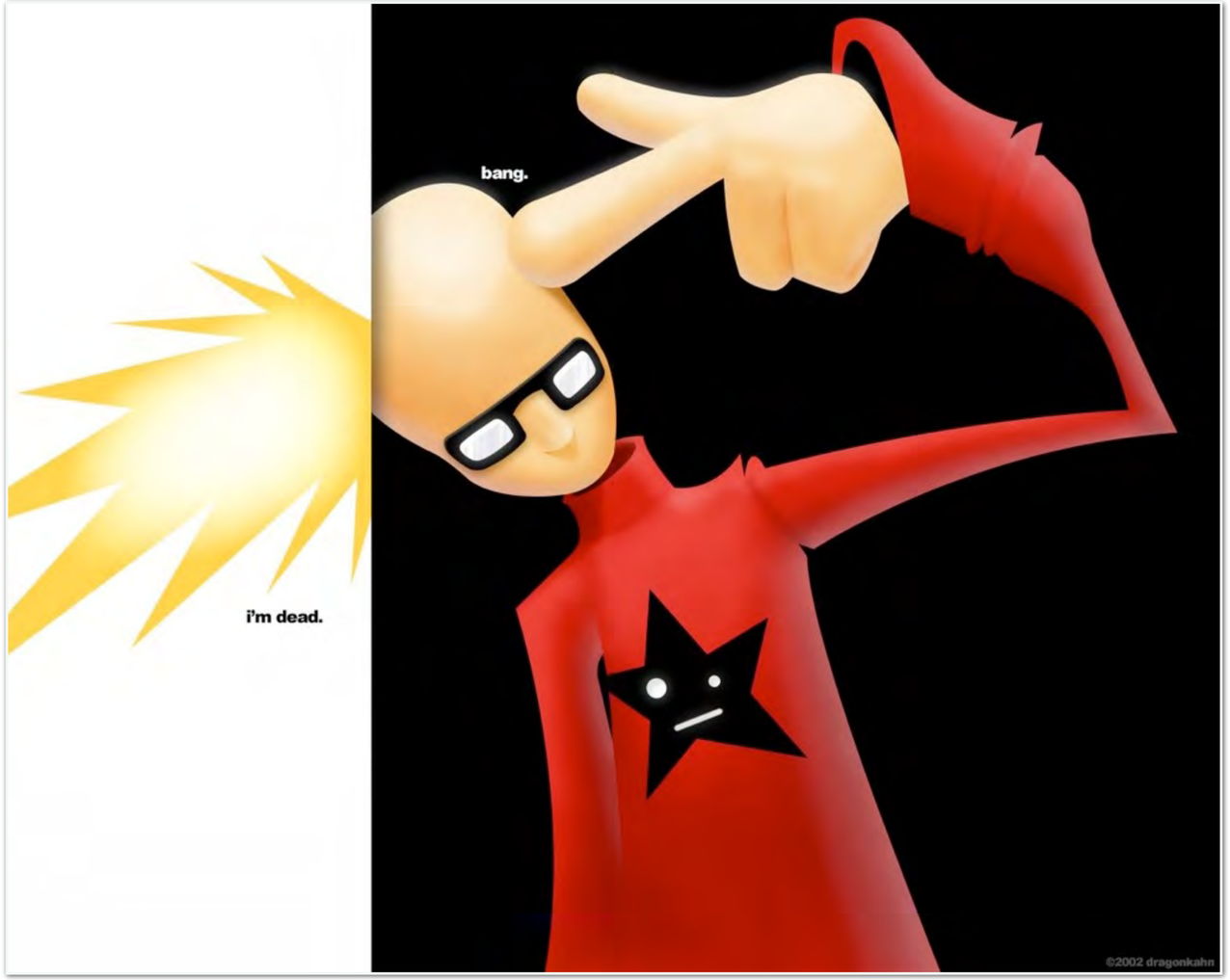
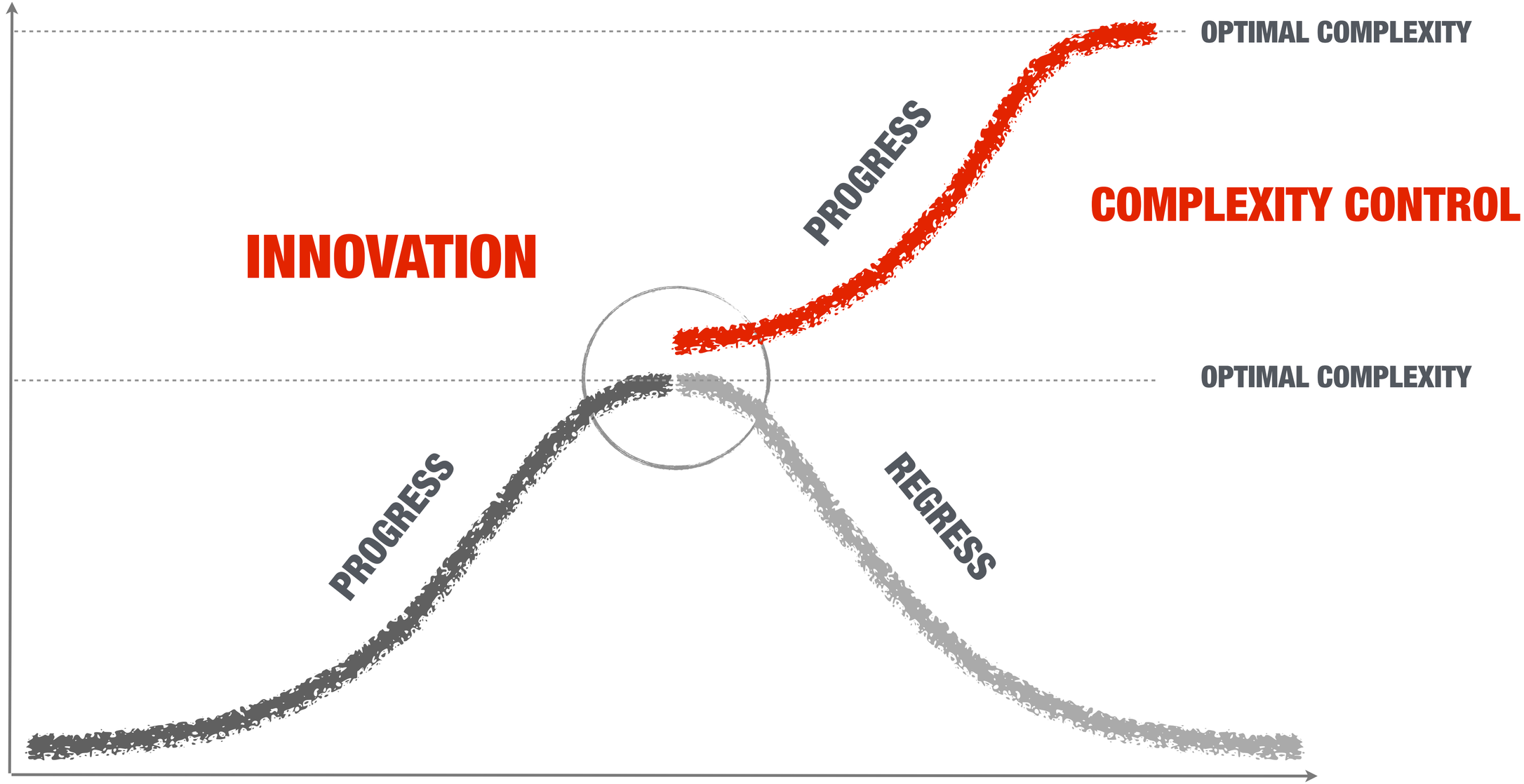
6810/T 6965/T 7011/T 7267/T 7752/T

# PROGRESS HAS A COMPLEXITY LIMIT



# AIM

# INNOVATION

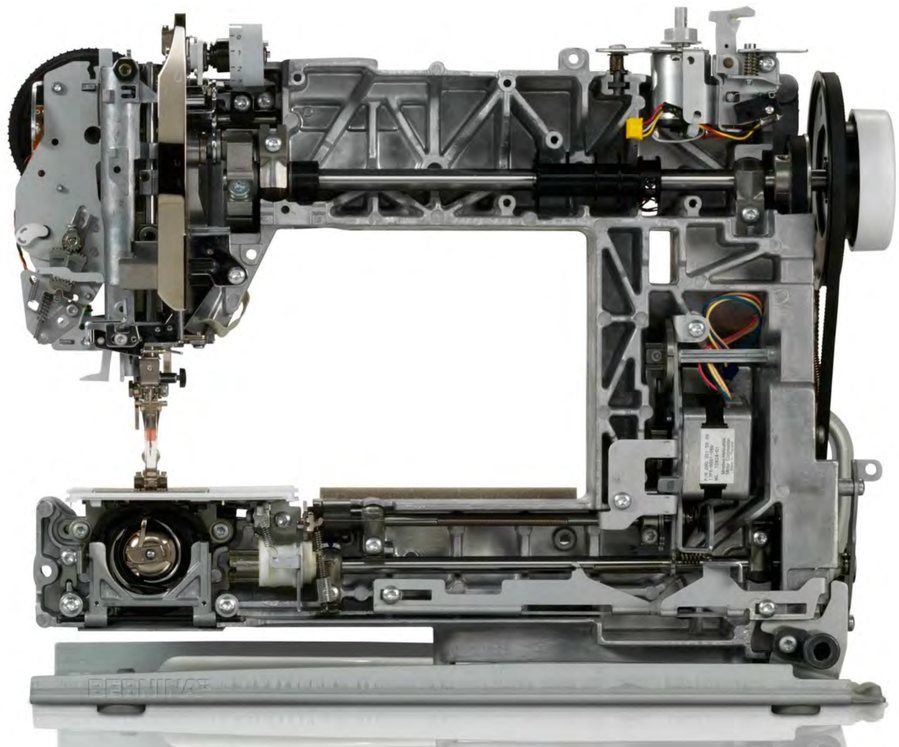

OPTIMAL COMPLEXITY
PROGRESS
COMPLEXITY CONTROL
INNOVATION
OPTIMAL COMPLEXITY
PROGRESS
REGRESS

# DESIRABLE & FUNCTIONAL OBJECT

# PROGRESSIVE DEVELOPMENT

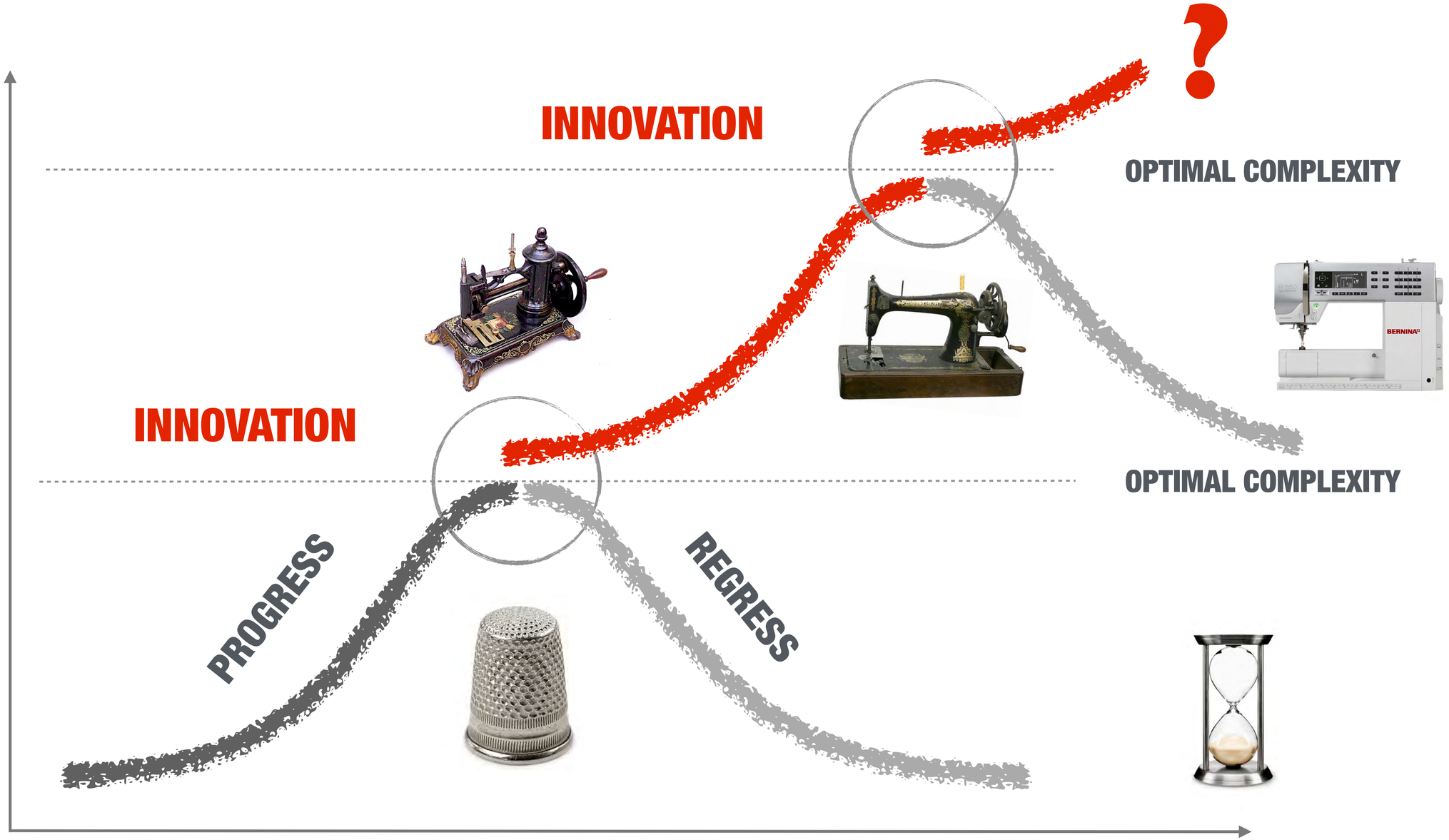
# PROGRESSIVE DEVELOPMENT

# PROGRESS OVER-DEVELOPMENT

# INNOVATION!

## EFFECT +1000%


INNOVATION
?
OPTIMAL COMPLEXITY
INNOVATION
OPTIMAL COMPLEXITY
PROGRESS
REGRESS
BERNINA

# PROGRESS

## 100 YEARS +20%

# INNOVATION!

## EFFECT +1000%

# PROGRESS

## 100 YEARS +20%


# AIM

# INNOVATION

## 100 YEARS STEP

# INNOVATION

## 1812

## 1912

## 2012

# INNOVATION

## 1812

## 1912


## 2012

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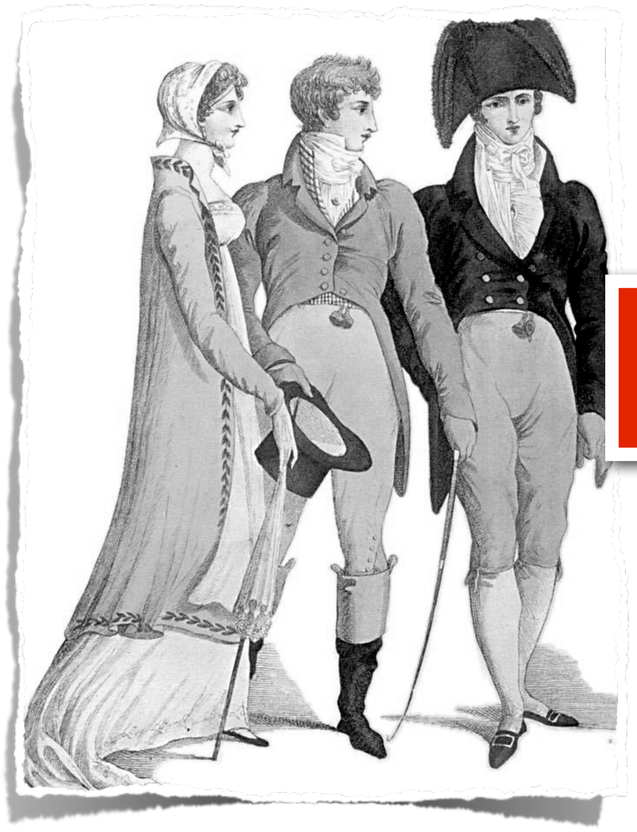
# INNOVATION

## 1812



## 1912

## 2012

# INNOVATION

## 1812

## 1912


## 2012

# INNOVATION

## 1812

## 1912


## 2012

# INNOVATION

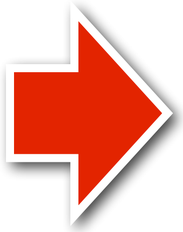
## 1812

## 1912

## 2012

?

# «FUTURE» HAS A FORMULA

VERBALISATION  VISUALISATION  REALISATION

## VERBALISATION
## 1866

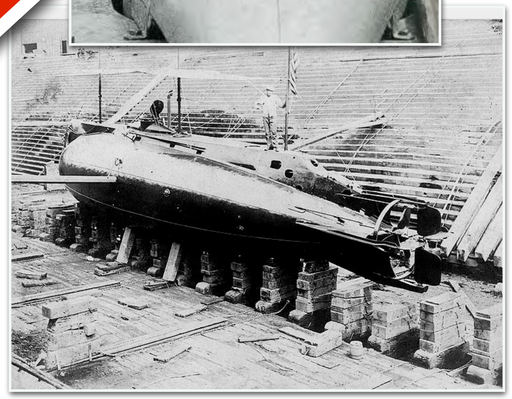
20 000 LEAGUES UNDER WATER

JULES VERNE

## VISUALISATION
## 1870

ALPHONSE DE NEVILLE

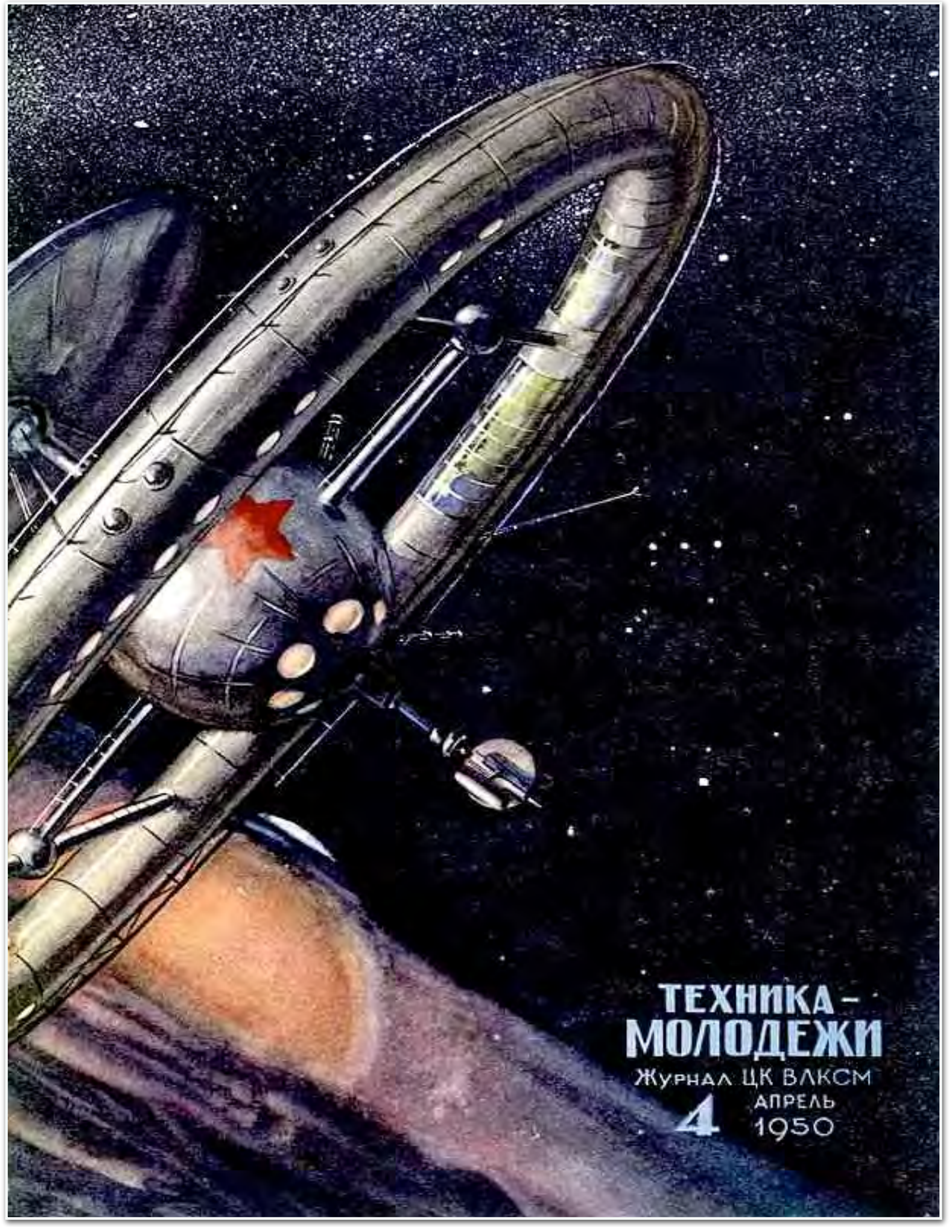
## REALISATION
## 1897



USS HOLLAND

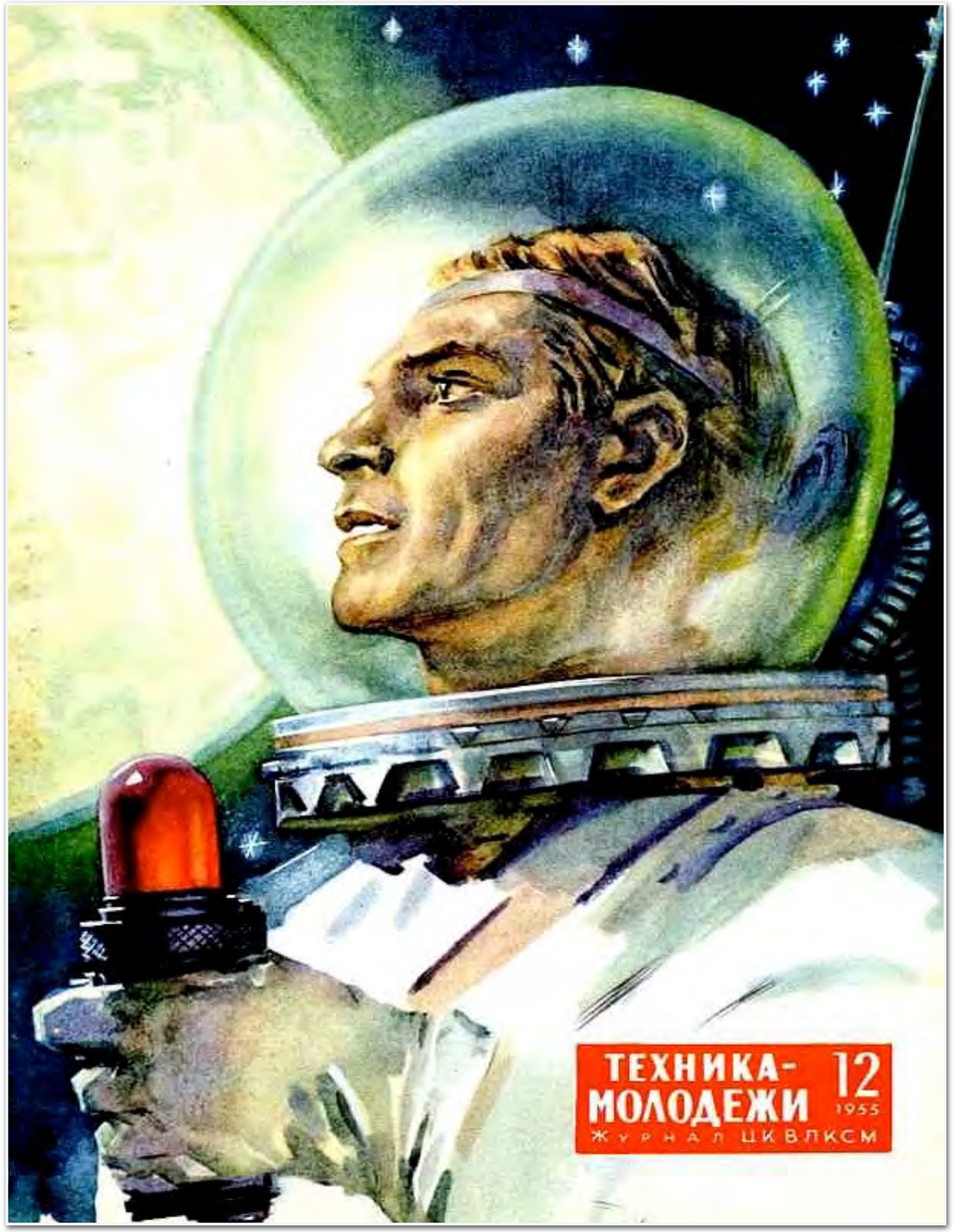
# 1950

## ORBITAL STATION IMAGE



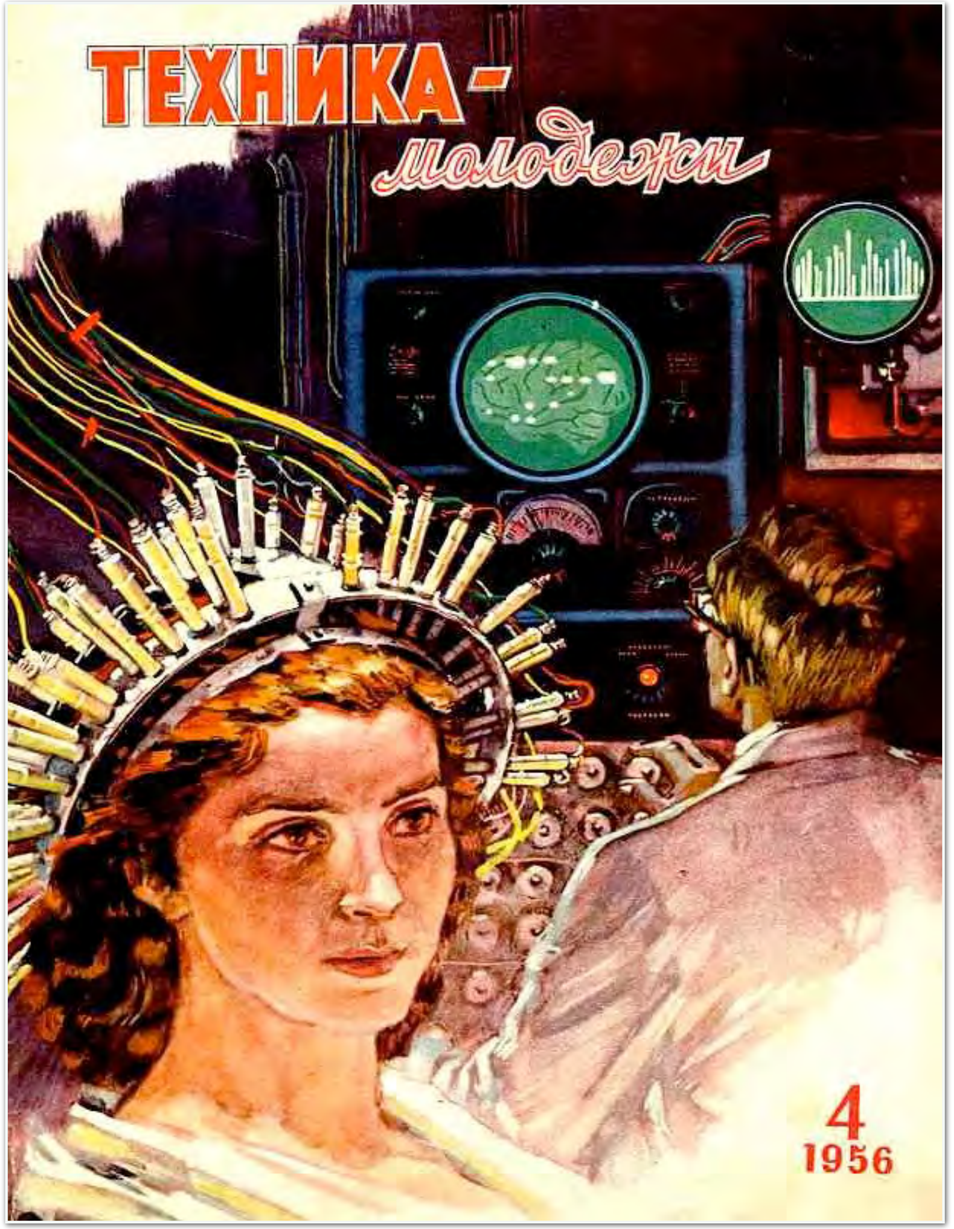
# 1955

## HUMAN IN SPACE CONCEPT



# 1956

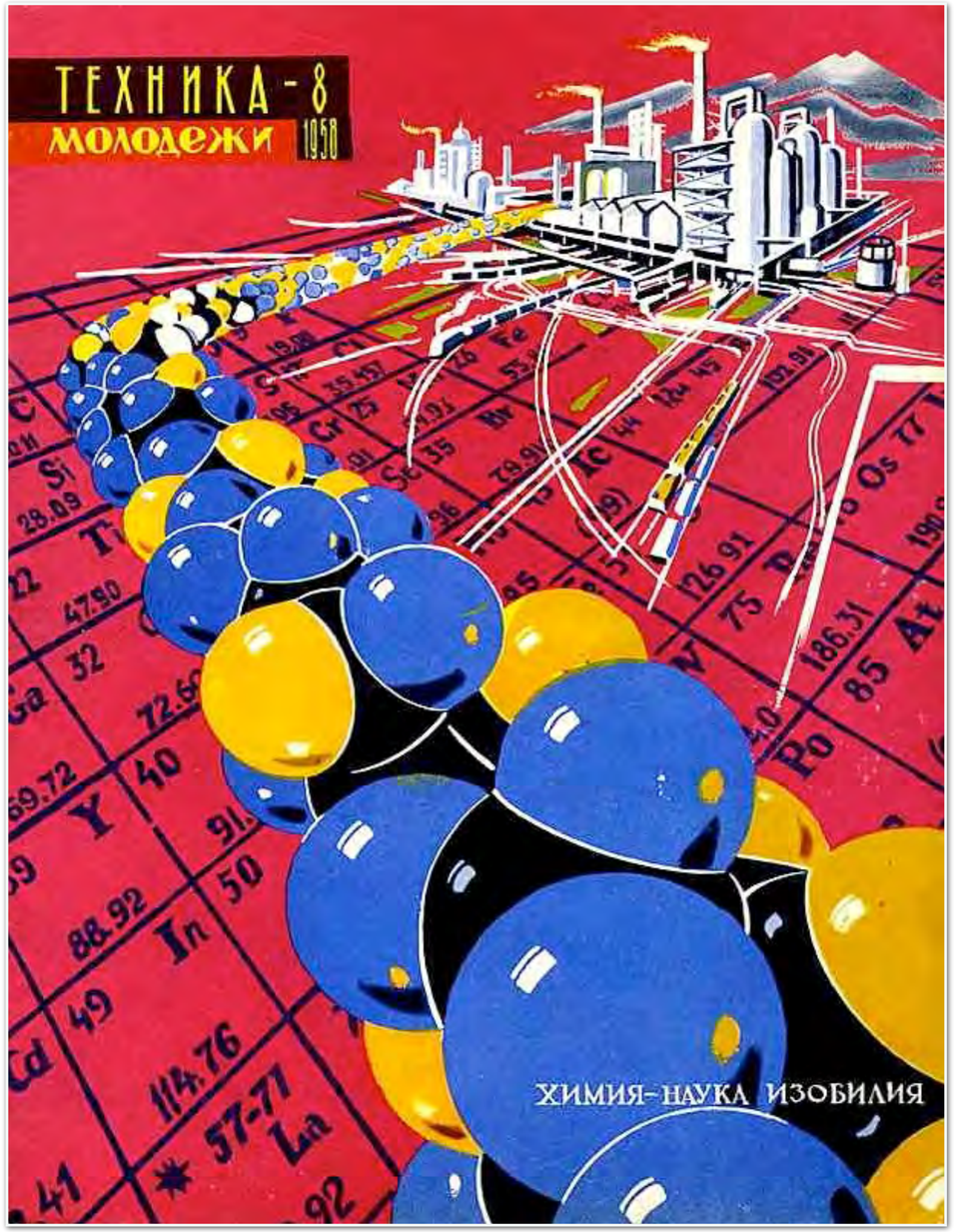
## BRAIN SCAN POSSIBILITY



# 1958

## NANOTECHNOLOGY

## INEXISTING MATERIALS CREATION



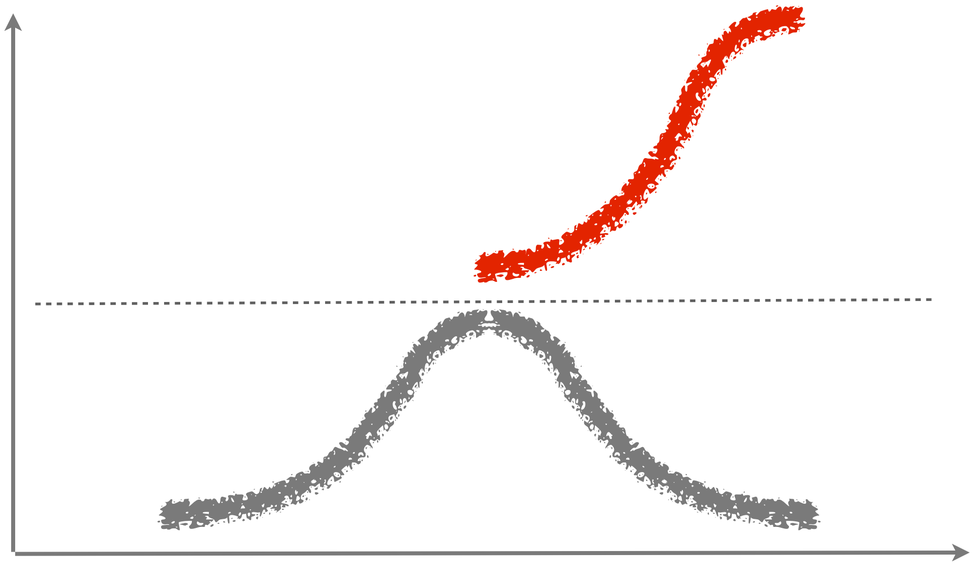
# 1959

## REMOTE MEDICINE
## VEHICLE OVER THE ROAD

# USSR

# 50-70-S

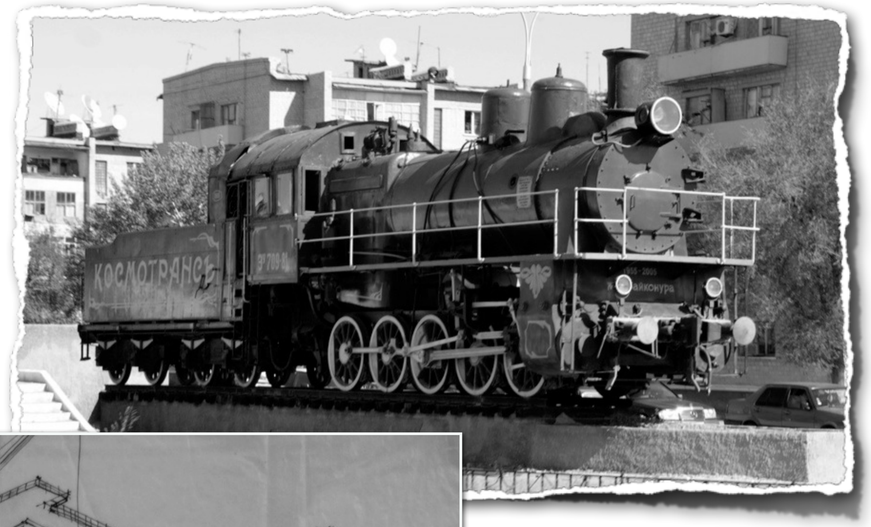
## INDUSTRY OF INNOVATIONS

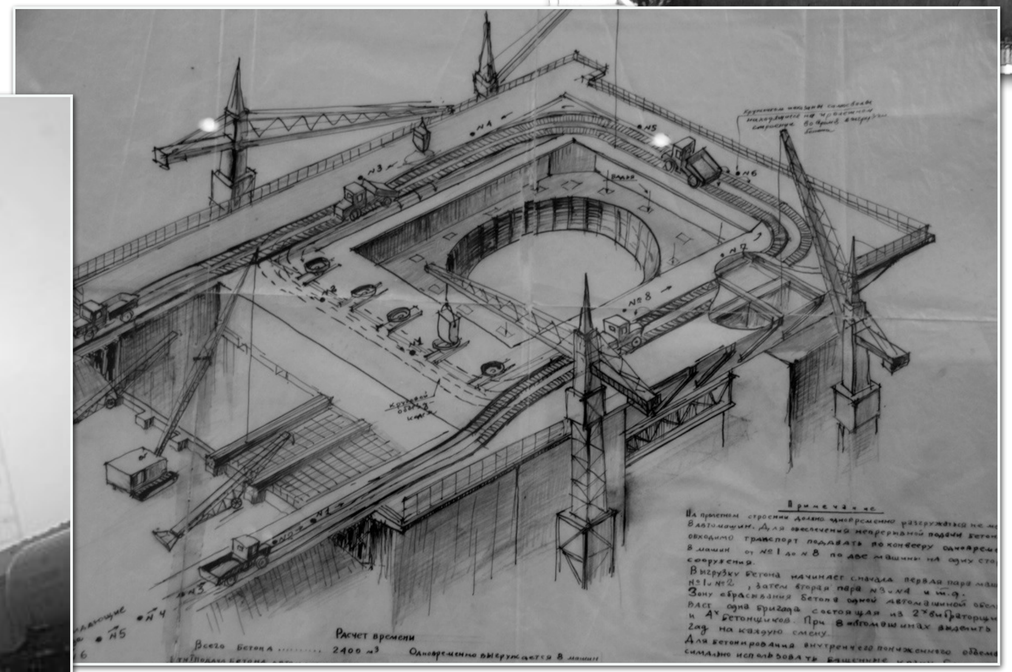


# 1955

## NEW SPACE LAUNCH PAD

## BUILT IN 1 YEAR!

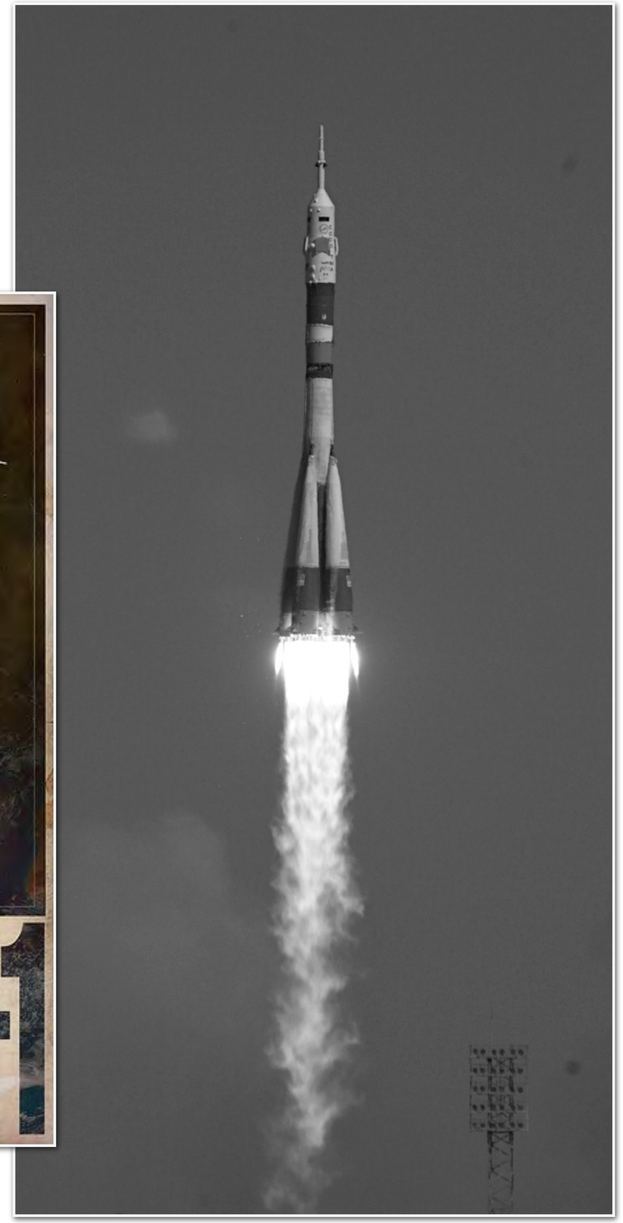


# 1957

## SPUTNIK

### THE 1-ST OBJECT IN SPACE

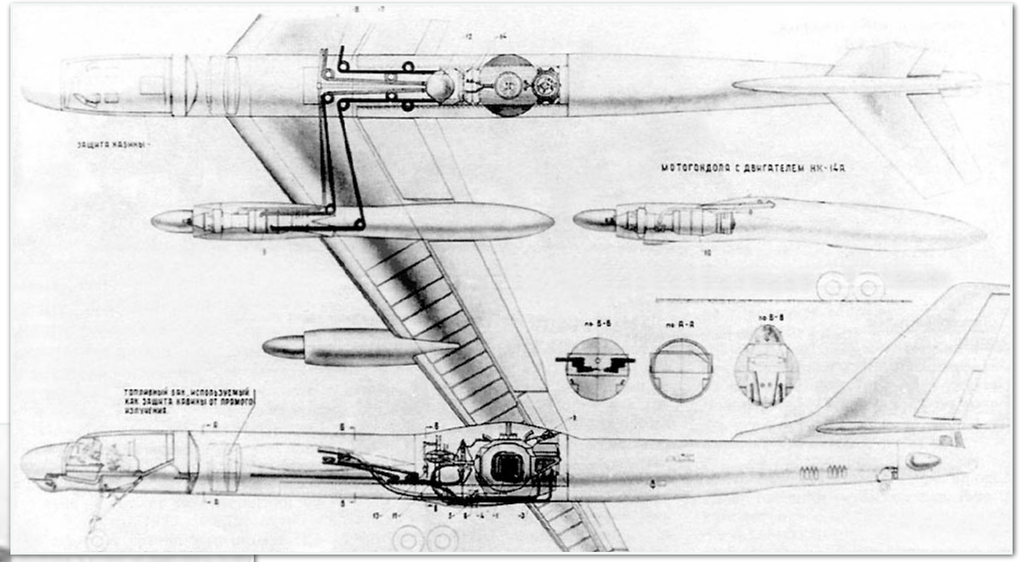



# 1957

## PEACEFUL NUCLEAR ENERGY


# 1961

## NUCLEAR POWERED AVIATION

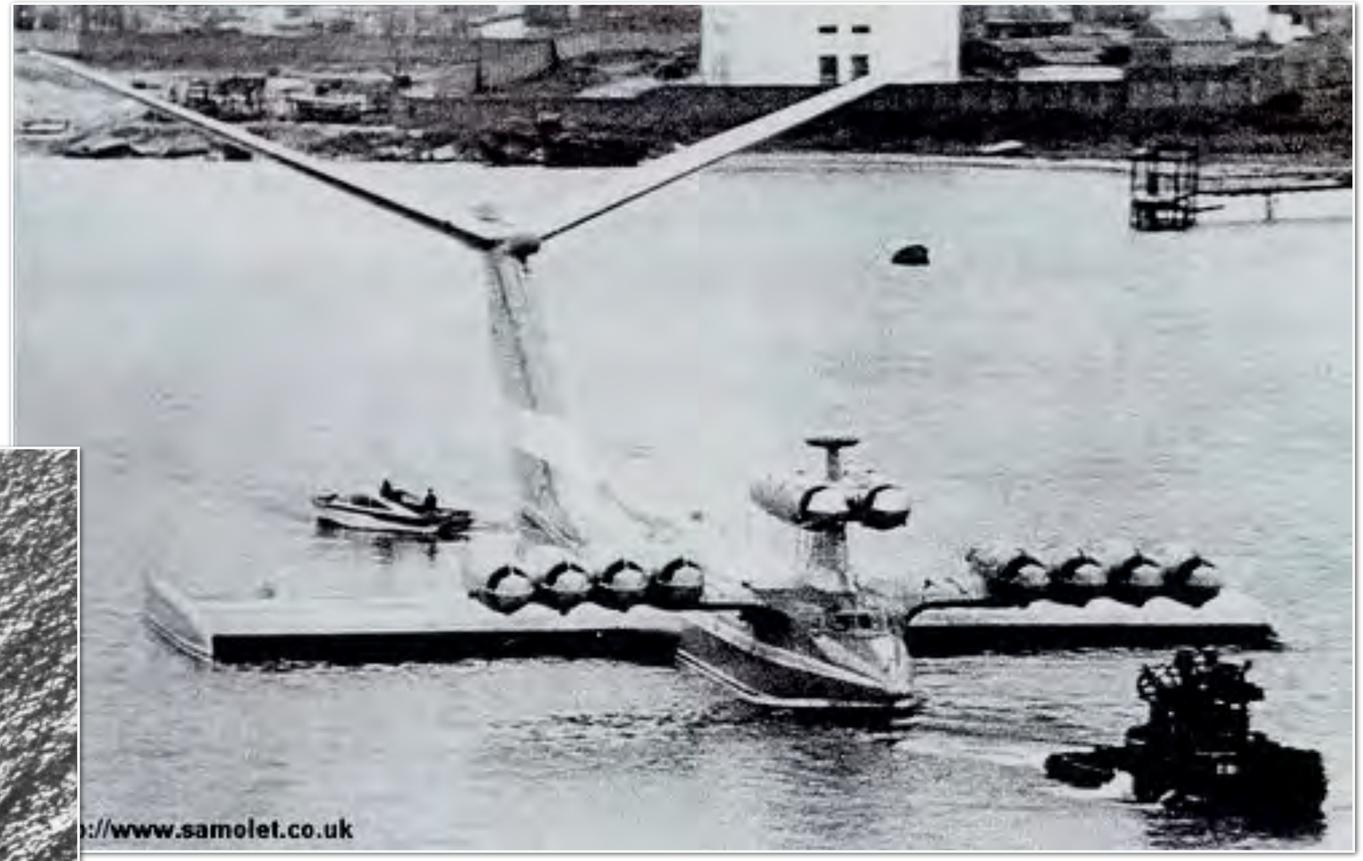


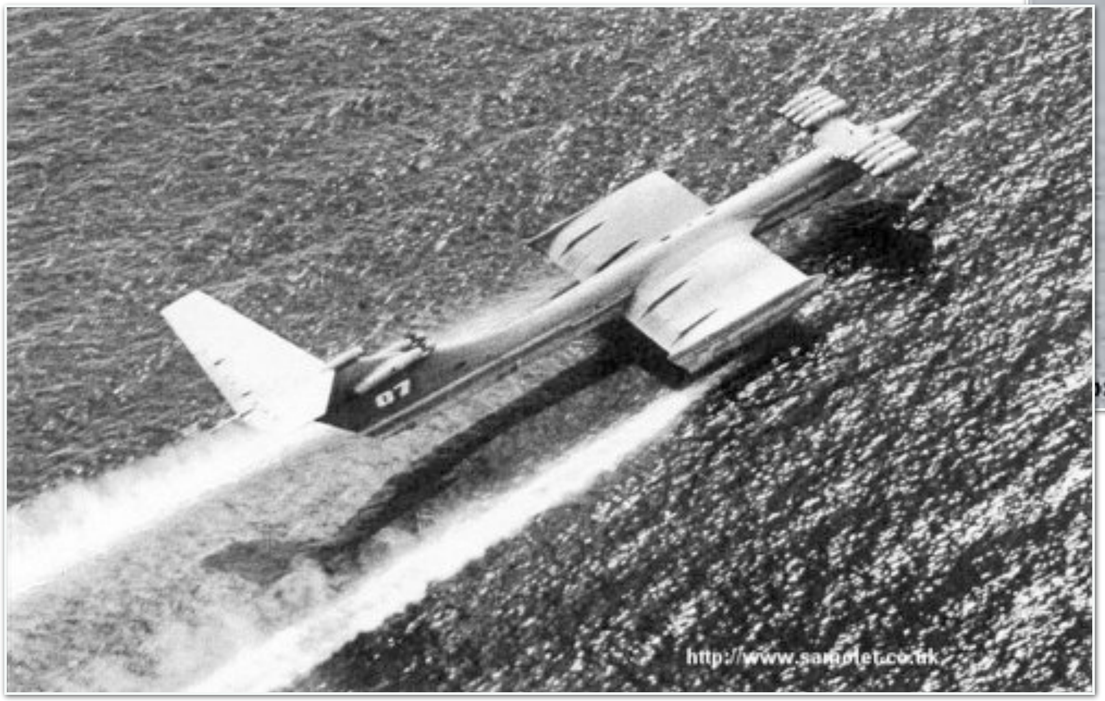

# 1961

## THE 1-ST HUMAN IN SPACE


# 1960

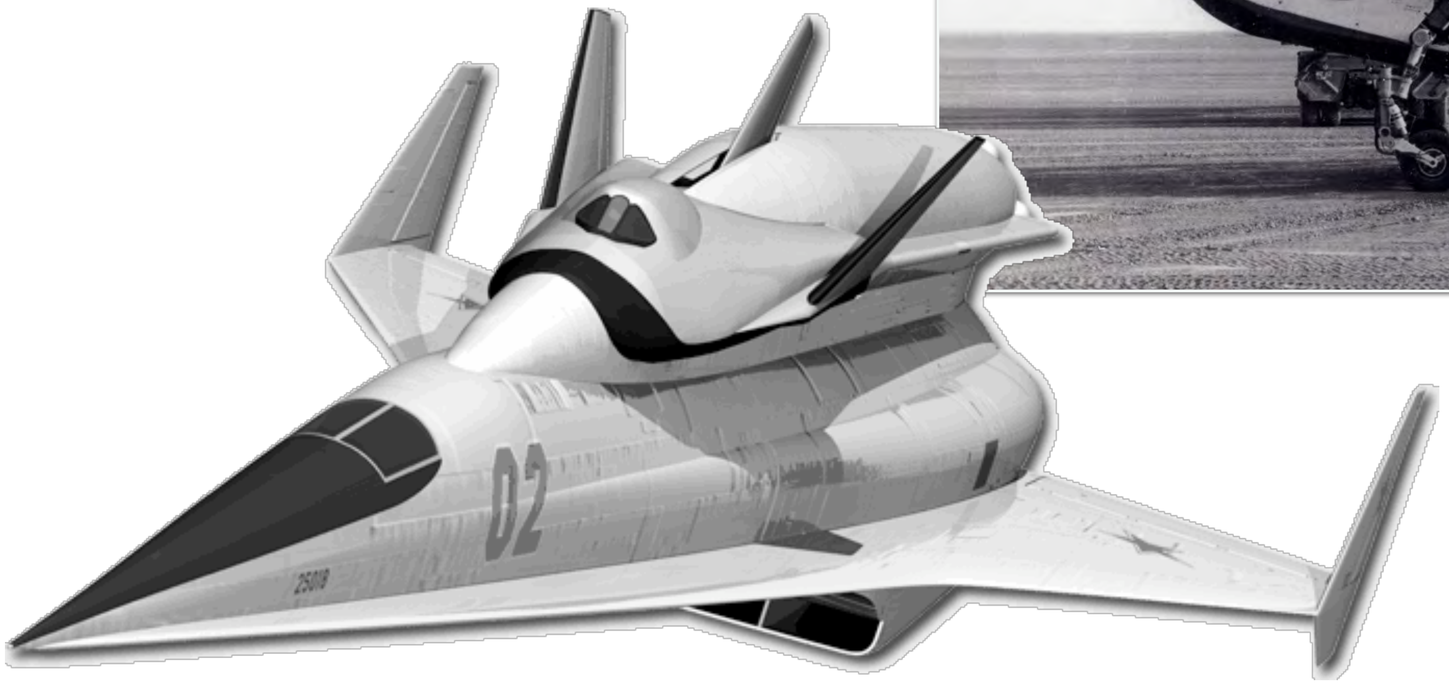
## HIGH SPEED SCREENPLANE



# 1962

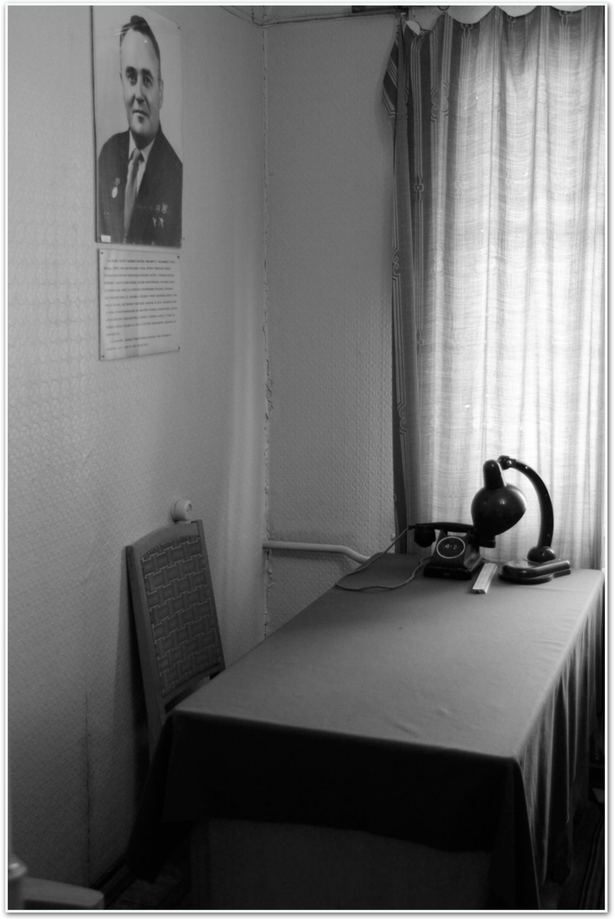
## SPACEPLANE
## VACUUM MANEUVER

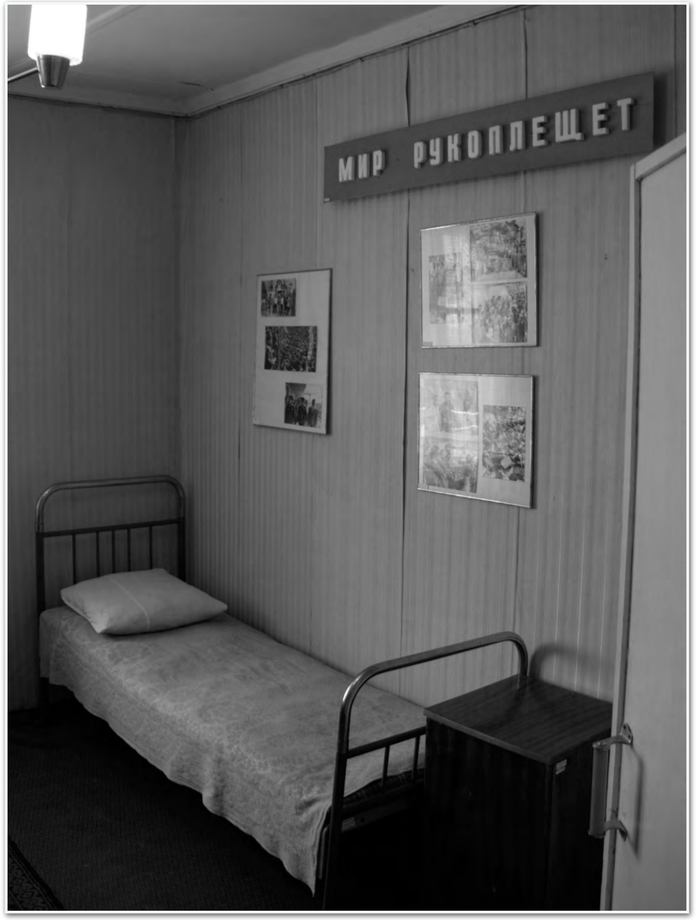



# 1988

## UNMANNED SPACECRAFT

# MODEST OFFICE
# VS
# GREAT DECISIONS!





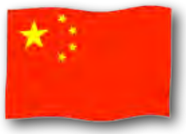
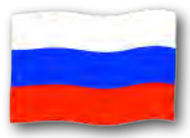
# GREAT OFFICE!

## VS

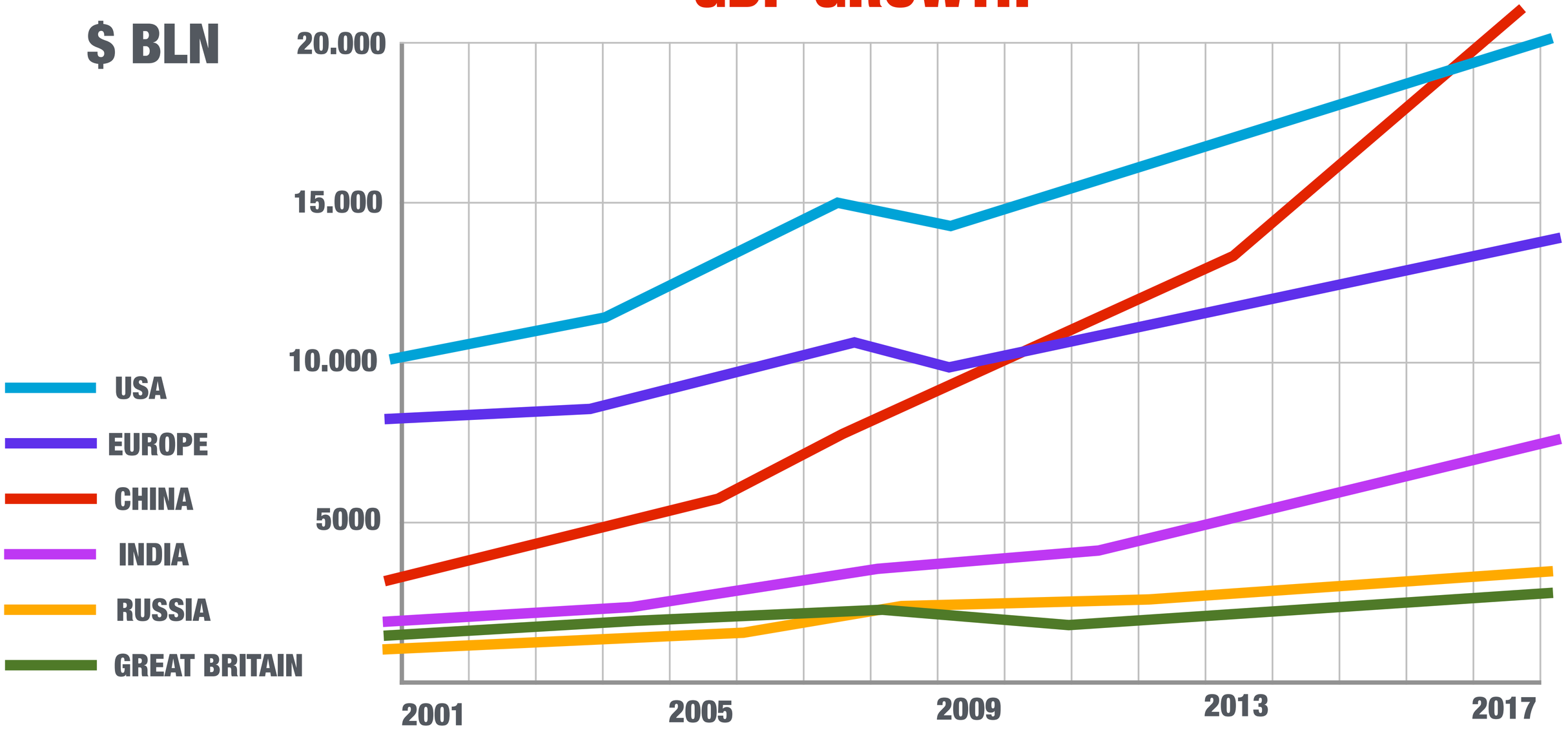
## MODEST DECISIONS

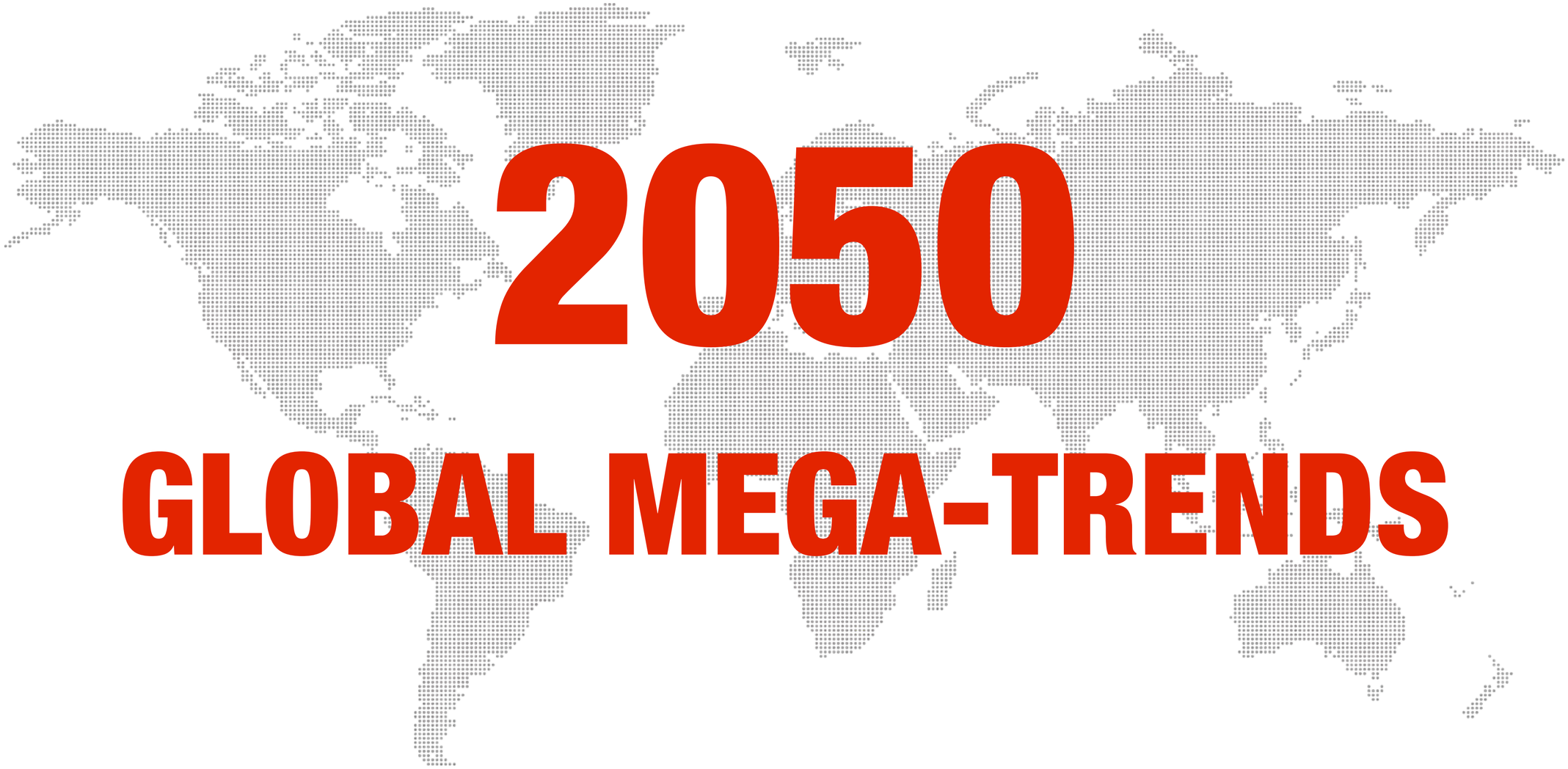

## WORLDWIDE...

# 2012

| $ BLN (МЛРД) | USA | CHINA | JAPAN | GERMANY | RUSSIA |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| NATIONAL PRODUCT | 14,600 | 10,747 | 5,400 | 3,300 | 1,700 |
| R&D | 2,9% | 1,4% | 2,7% | 3% | 1,3% |
| | 400 | 154 | 144 | 100 | 22 |

# GDP GROWTH





# 2050

# GLOBAL MEGA-TRENDS

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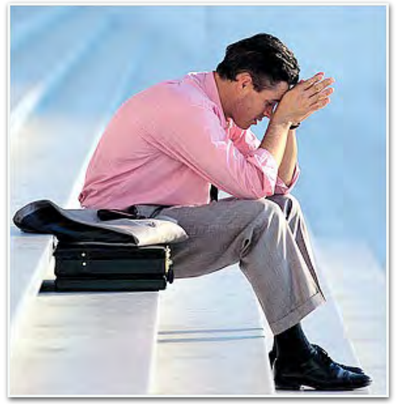
# GLOBAL MEGA-TRENDS 2050 DEMOGRAPHY

## 9 600 000 000 POPULATION

## 55% MIDDLE CLASS

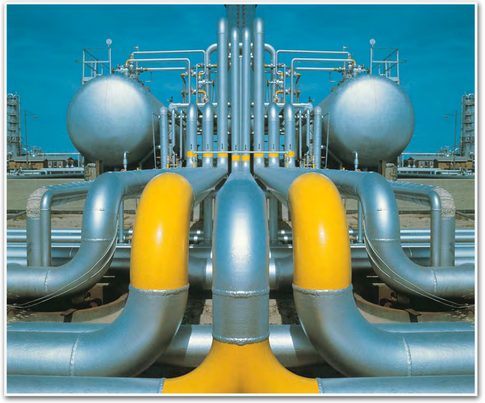
## EDUCATED JOBLESS



## ASIA-DOMINATOR


## 70% URBAN POPULATION

## RESOURCES INSUFFICIENCY



# IF NOT CHANGE?


CLEAN WATER
SHORTAGE

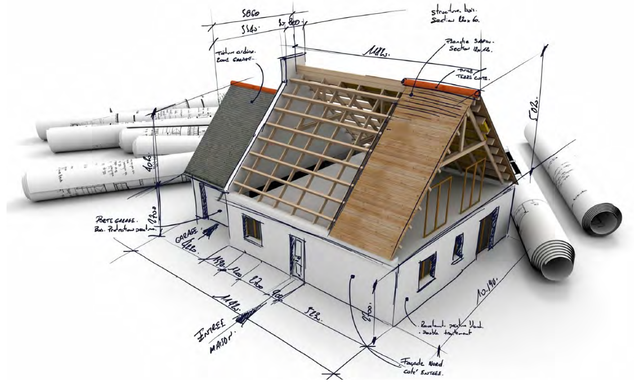

RICH-POOR DISBALANCE
WEALTH / HEALTH / RESOURCES

POLITICAL
INSTABILITY

SANITARY
CRISIS

GLOBAL WARMING

AGRICULTURE LAND INSUFFICIENCY



BUILDING MATERIALS INSUFFICIENCY

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# RUSSIA 2050

## OBJECTIVES OF FUTURE

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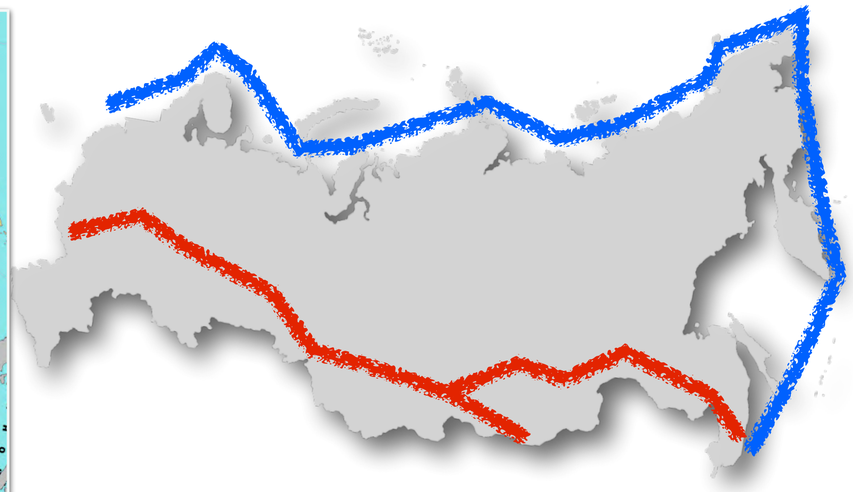
AIM

# TERRITORIES

## INFRASTRUCTURE


## TRANSPORT



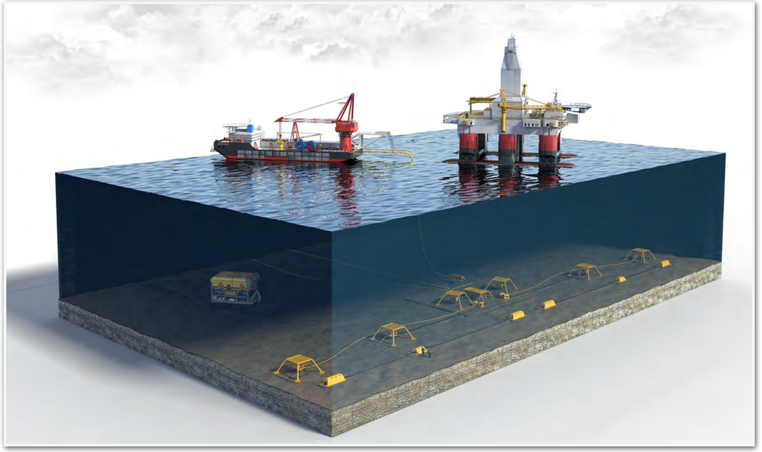
## SPACE EXPLORING

# ARCTIC

## ICE MELTING / ECOLOGY

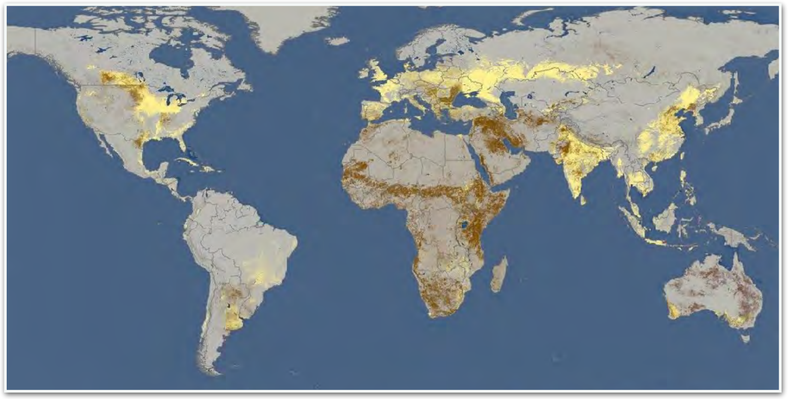

## TRANSPORT

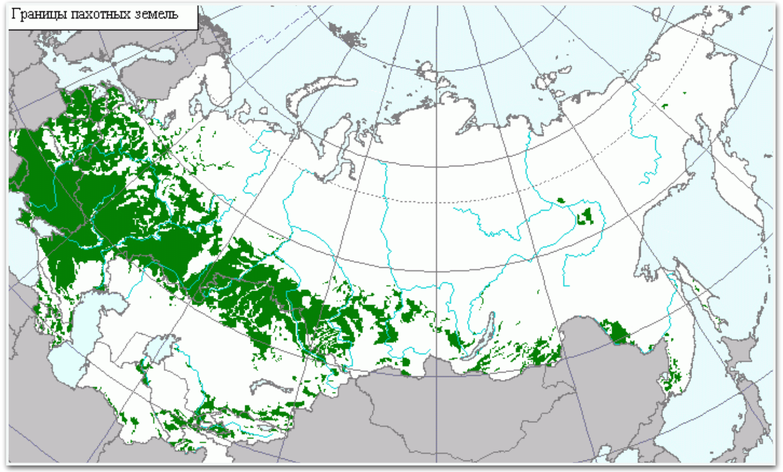
## RESOURCES



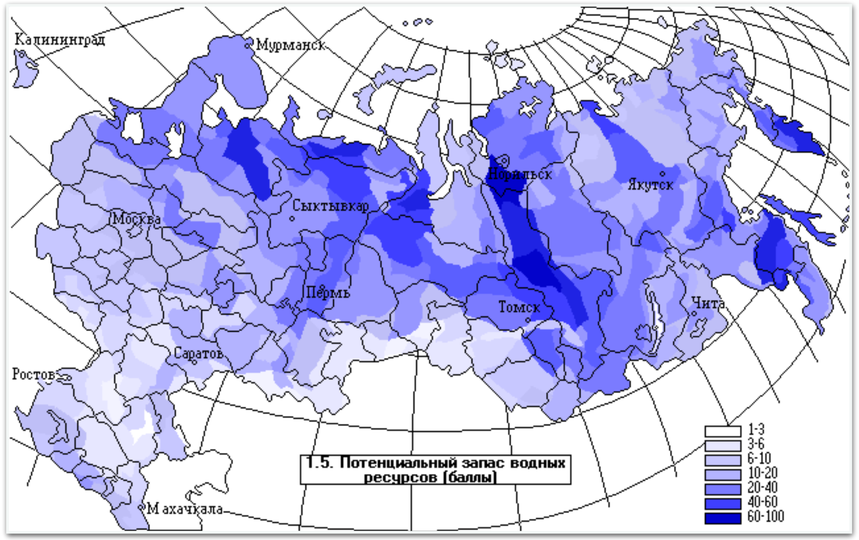
# RESOURCES

## AGRICULTURE

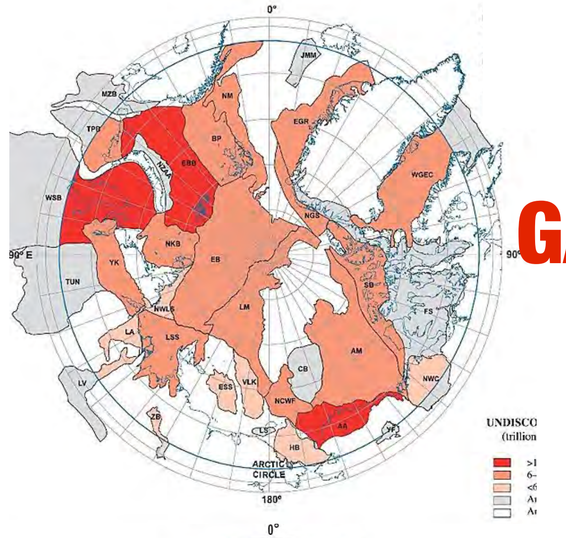





## CLEAN WATER




## GAS




## OIL

AIM

# SECURITY

## DEFENCE

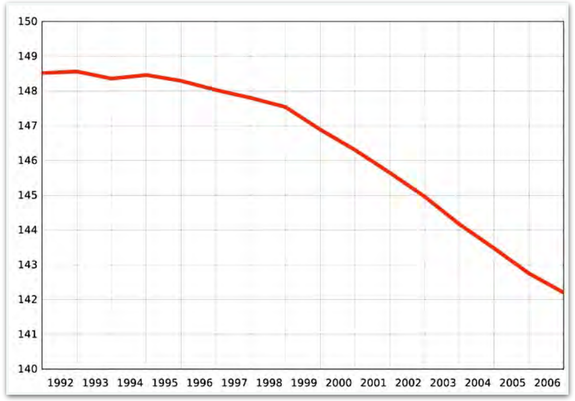
## FOOD

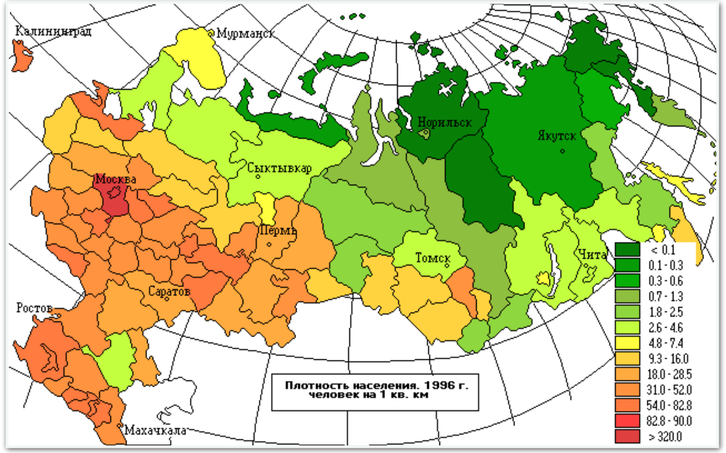
## INFO

AIM

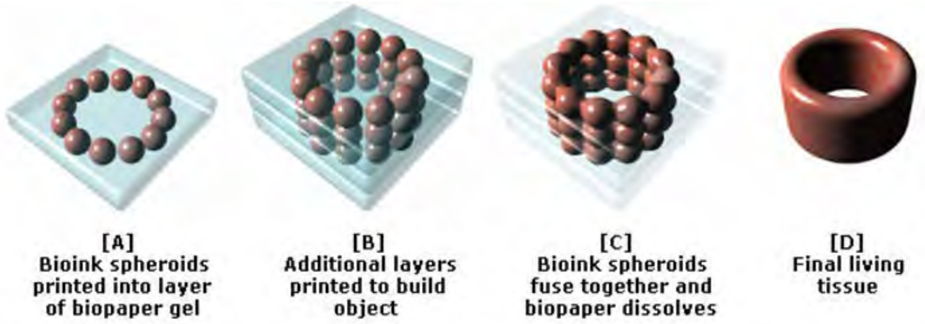
# POPULATION

## DEMOGRAPHY

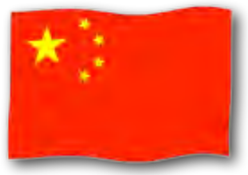



## HEALTH



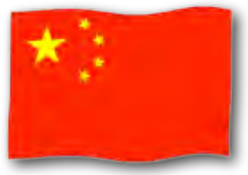

## HOUSING



# BY THE WAY…

**THE DEFENCE POLICY RESEARCH CENTRE**
**OF THE ACADEMY OF MILITARY SCIENCES OF THE PEOPLE'S LIBERATION ARMY**

"The Arctic region has rich oil and gas resources and quick and convenient shipping conditions, which has important meaning for ensuring the sustained development of China's economy," the centre said in its report, according to excerpts published by the official China News Service.

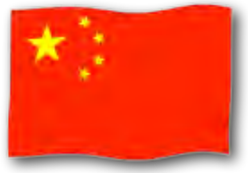


# BY THE WAY…

**THE DEFENCE POLICY RESEARCH CENTRE**
**OF THE ACADEMY OF MILITARY SCIENCES OF THE PEOPLE'S LIBERATION ARMY**

China has a right to a share of the Arctic's resources, be present in the region and to carry out scientific research there, it said.

China's growing involvement in Arctic affairs acts to prevent a minority of countries from dominating the region and protects the rights of non-Arctic countries, it said.



# BY THE WAY…

**THE DEFENCE POLICY RESEARCH CENTRE**
**OF THE ACADEMY OF MILITARY SCIENCES OF THE PEOPLE'S LIBERATION ARMY**

"The Arctic region could become an important supply base in the future for China's overseas oil. China will ... open cooperation with Arctic countries with energy supplies."

# AIM

## GLOBAL COMPETITION BY INNOVATIONS

### PROJECT SAMPLE

# 2D TRANSPORT

# CURRENT RUSSIAN ROADS NETWORK

# CURRENT 3D INFRASTRUCTURE

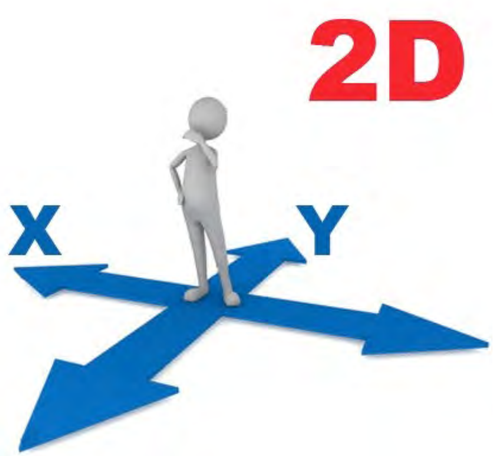

# AIM

# 3D

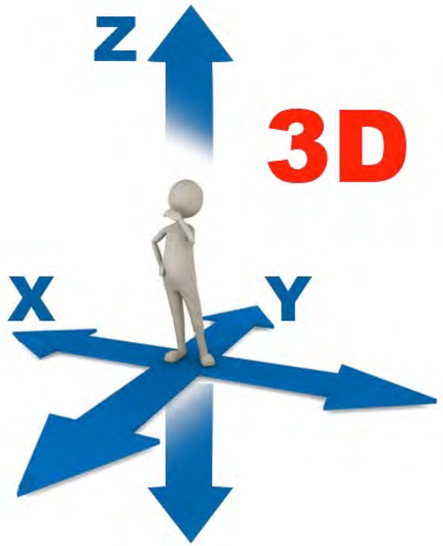
## TRANSPORT

## ANYONE / ANYTIME / ANYWHERE

# 2D




# 3D



# 3D TRANSPORT

## TIME HAS COME!

# ALL IN ONE!

MULTIFUEL

DIESEL / JET-A

**HYBRID**


AFFORDABILITY / COMFORT


VERTICAL / SHORT
TAKE OFF AND LANDING

SPPED / RANGE

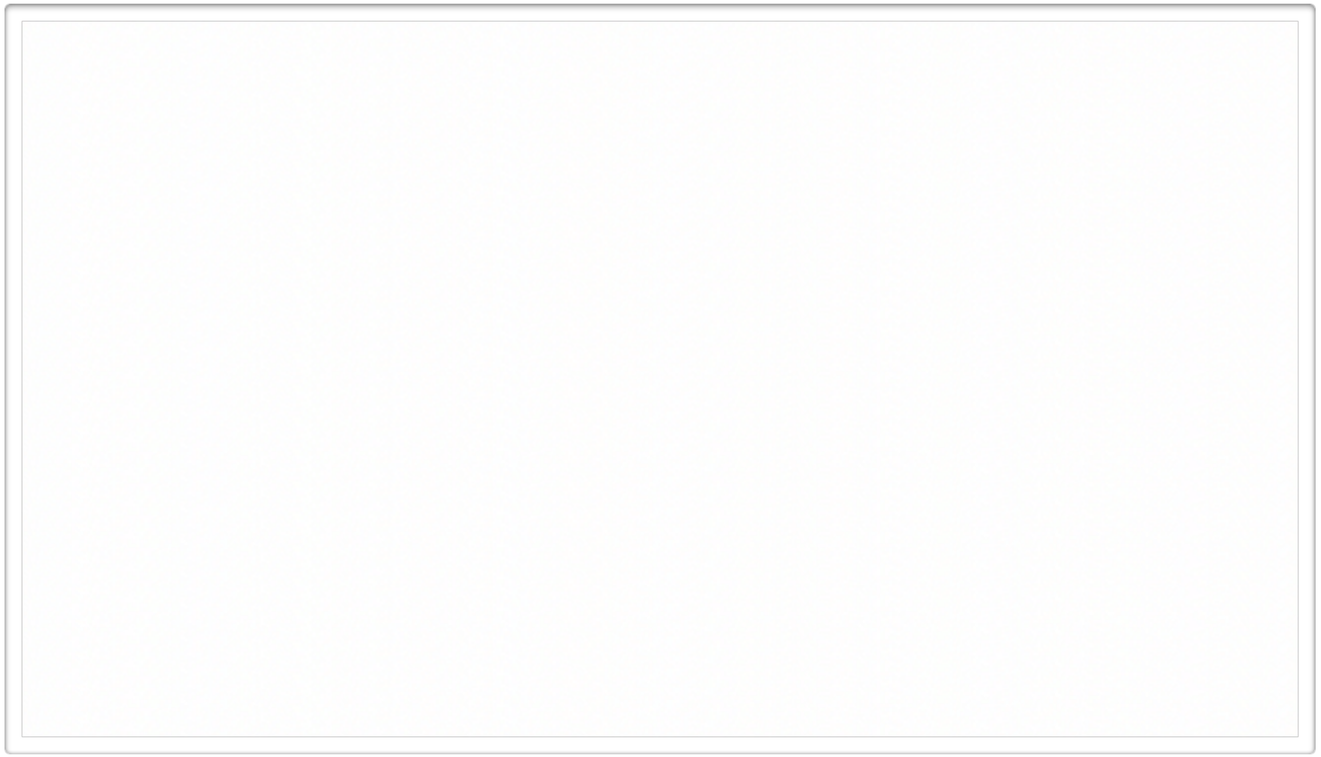

ASTRAROSSA | DESIGN

# AFFORDABILITY

## MASS PRODUCTION CASE


≈


# 3D NAVIGATION COLLECTIVE UNCONCIOUS




DIESEL V12
RA-105
ASTRAROSSA


DIESEL V12
RA-0105
RA-105
ASTRAROSSA

# TRANSPORT INNOVATIONS

## 1812

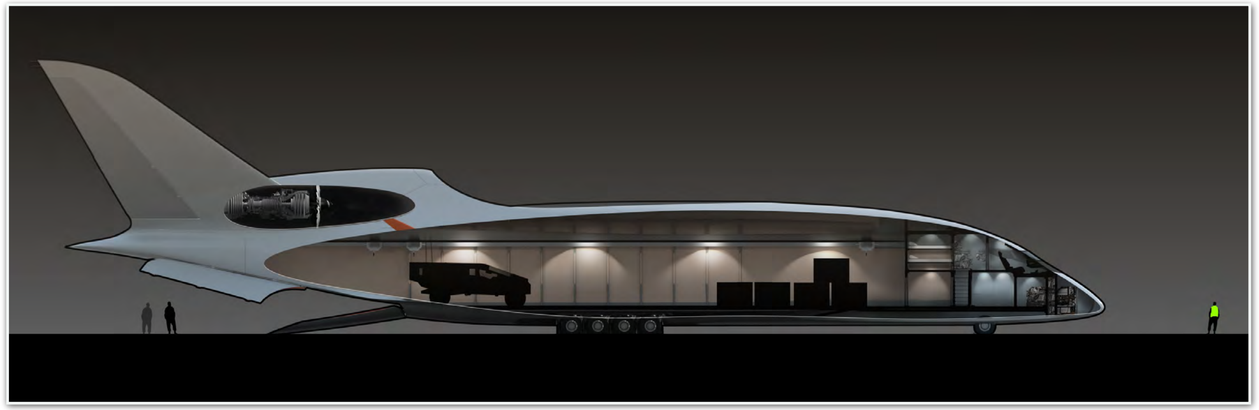
## 1912

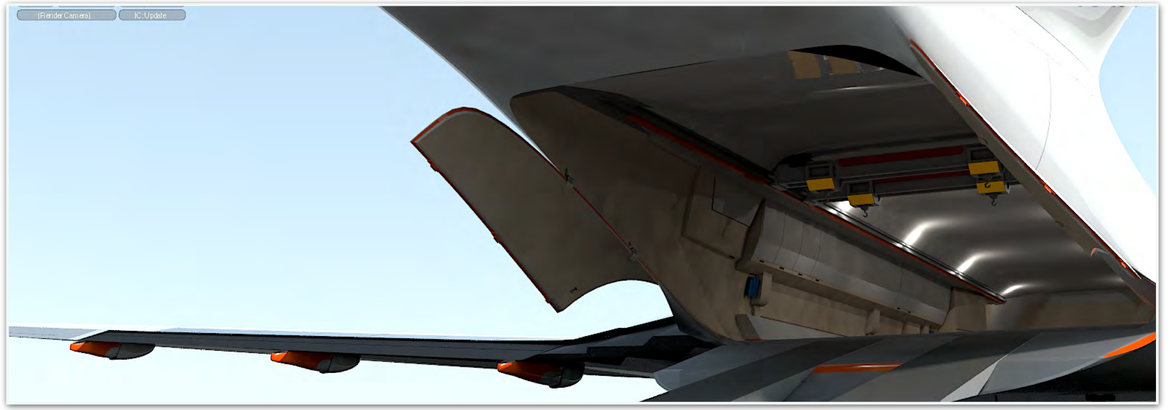
## 2012

# AIM

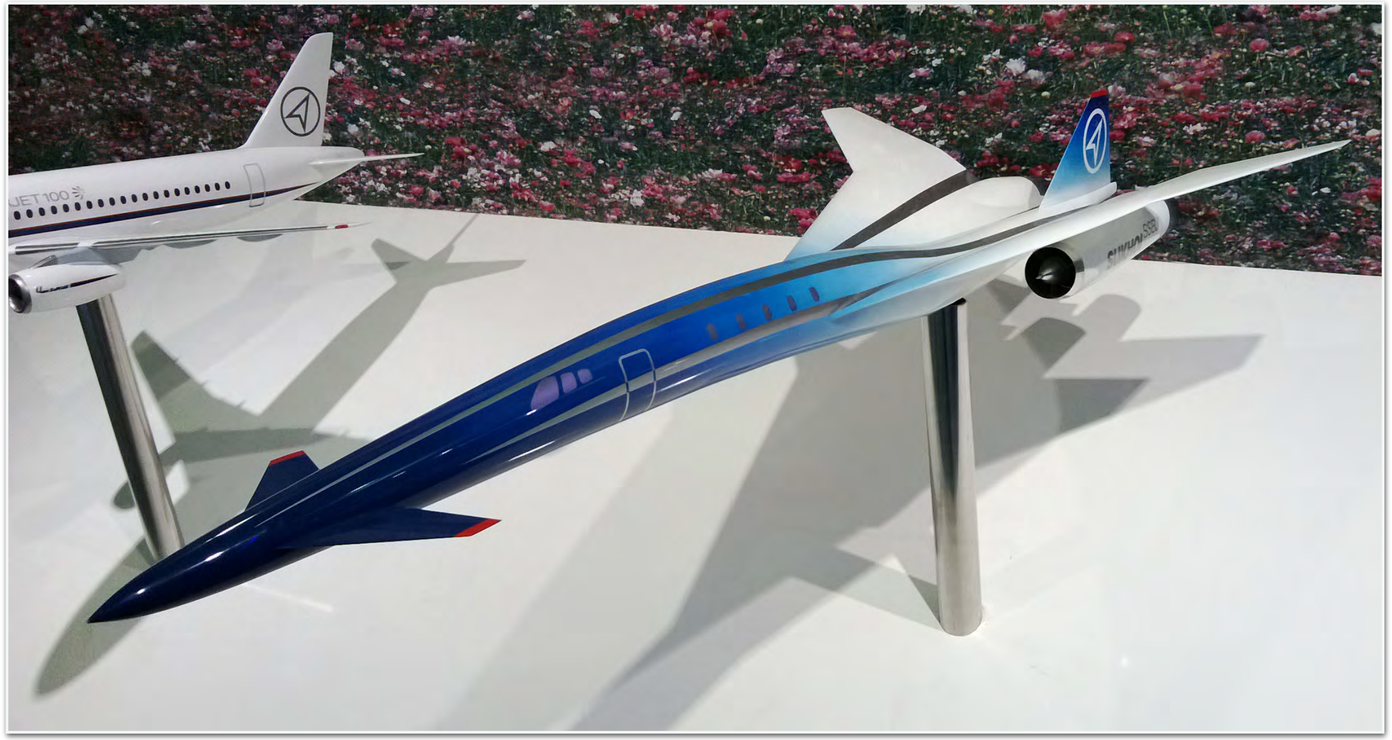
## ADVANCE PROJECTS

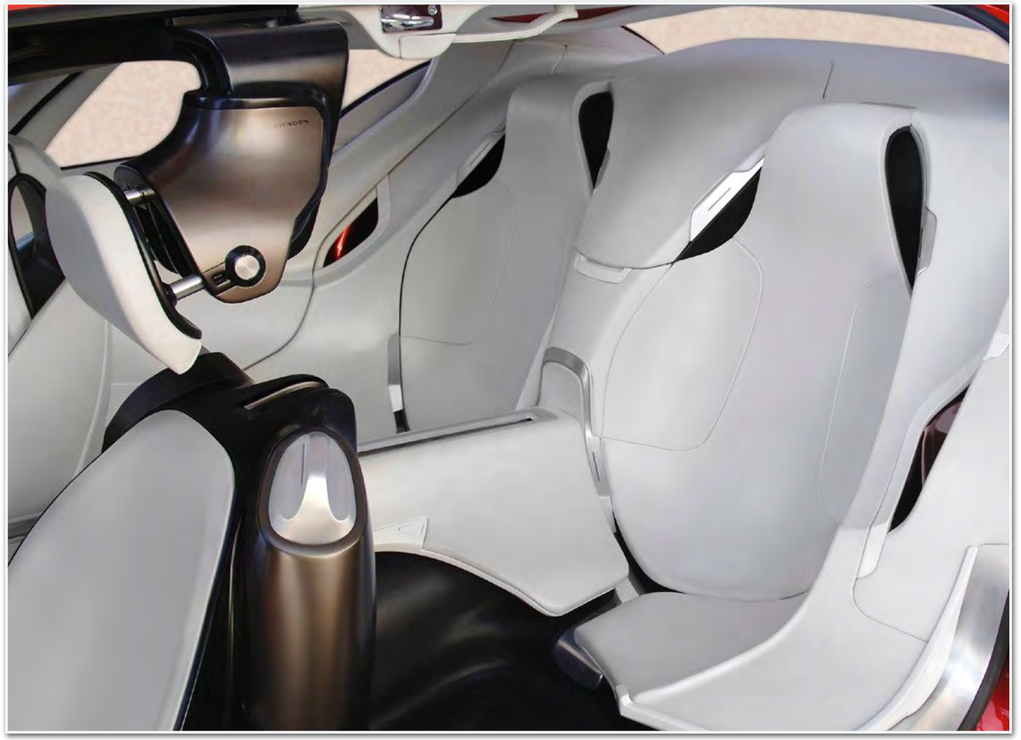
# HEAVY LOAD / WIDE BODY TRANSPORT AIRPLANE ADVANCE PROJECT



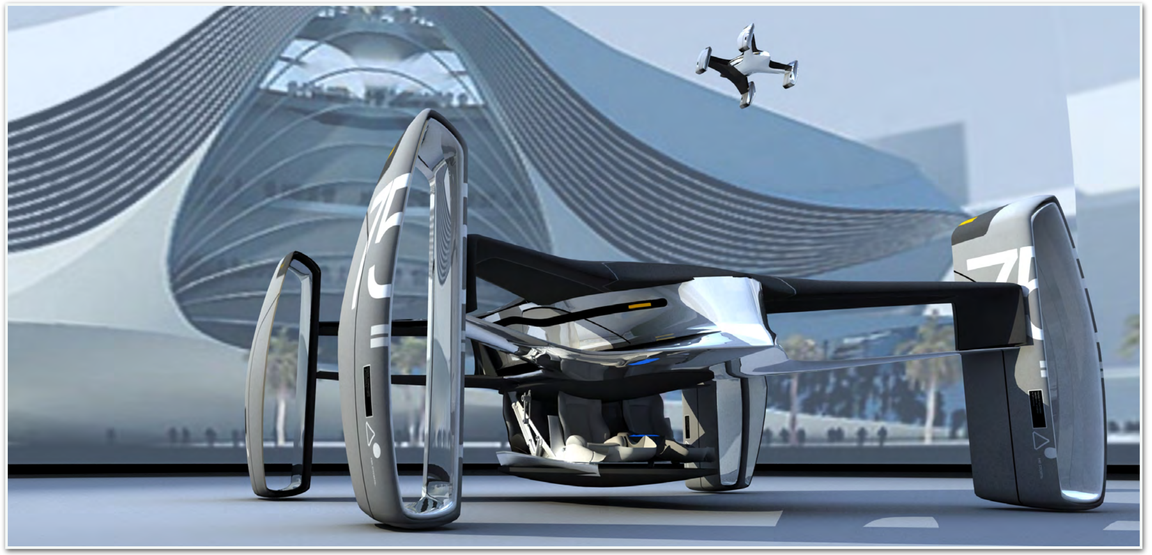
# SUKHOI SUPER SONIC BUSINESS JET INTERIOR DESIGN

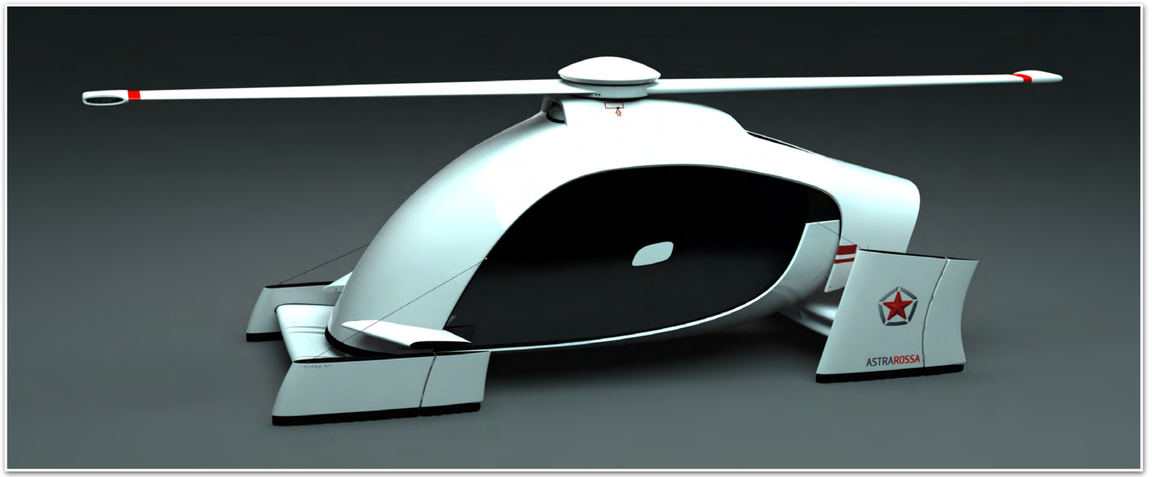




# 4D TRANSPORTATION SYSTEM ADVANCE PROJECT

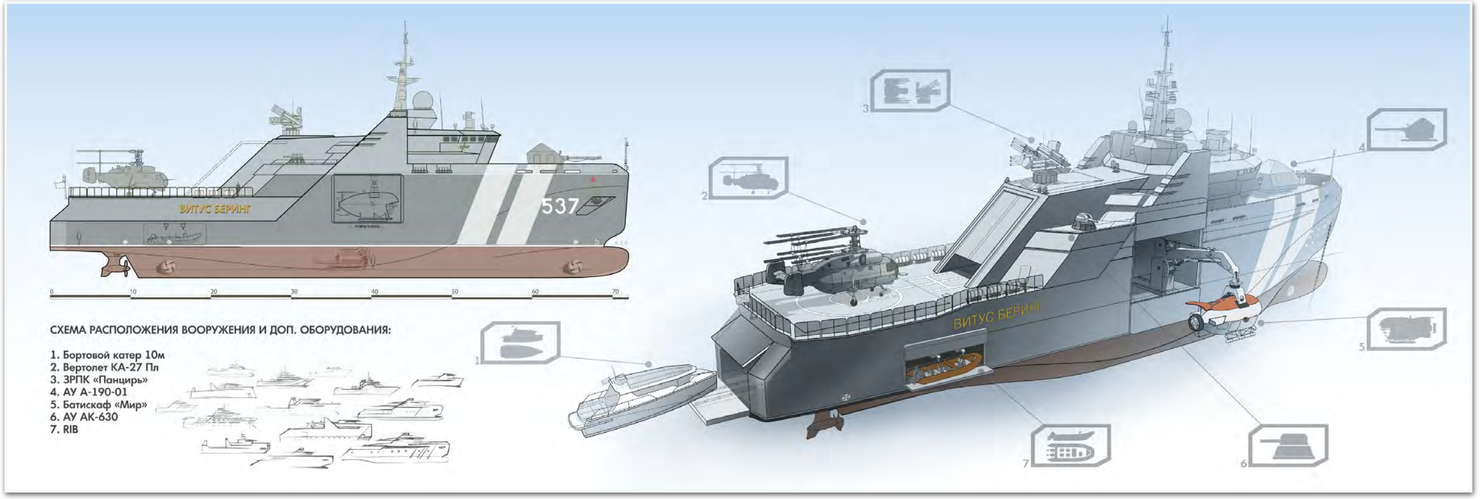

# PERSPECTIVE 3D TRANSPORTATION ADVANCE PROJECT

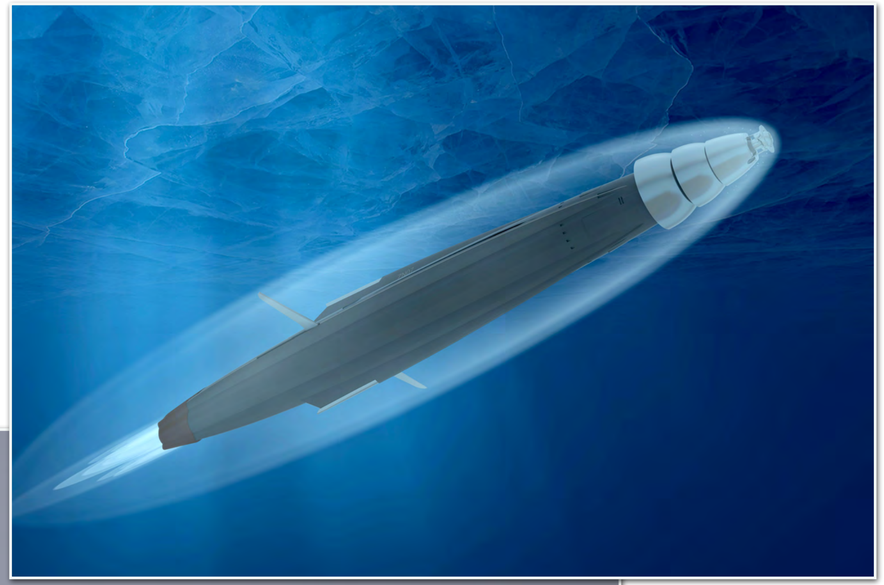


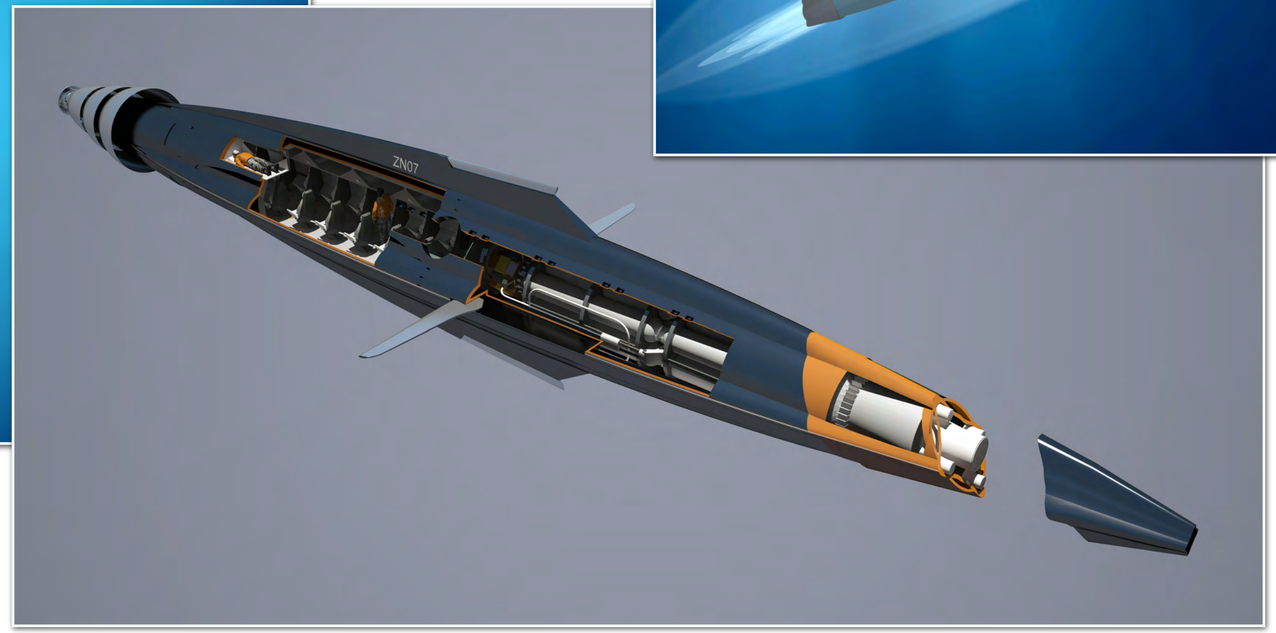
# COMPACT PATROL ICEBREAKER ADVANCE PROJECT



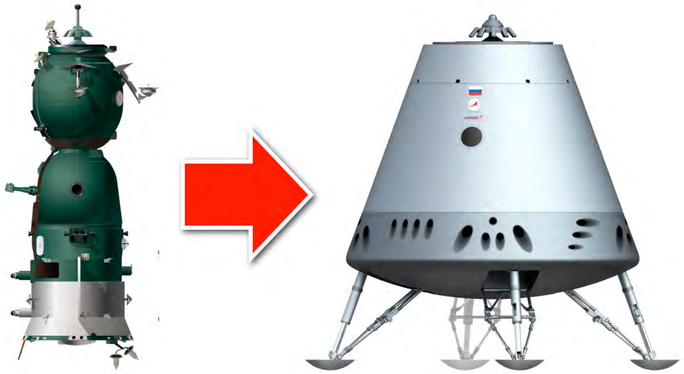


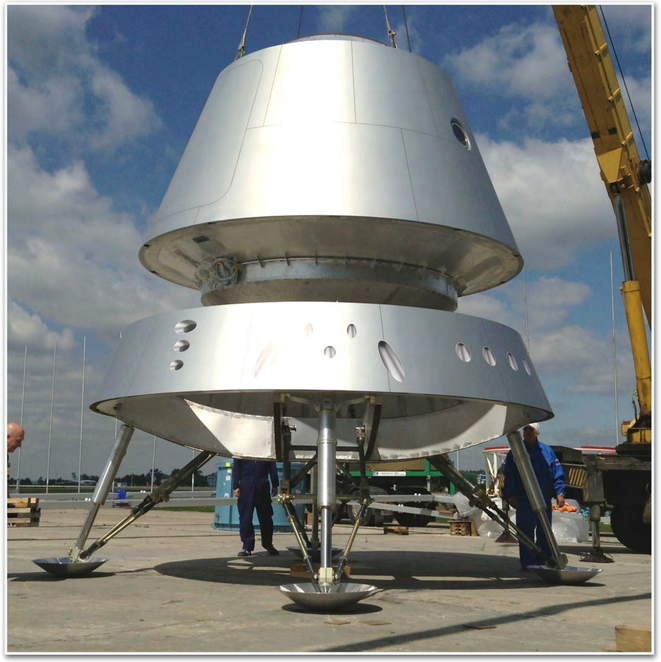
# CAVITATION HIGH SPEED SUBMARINE 500 KM/H ADVANCE PROJECT

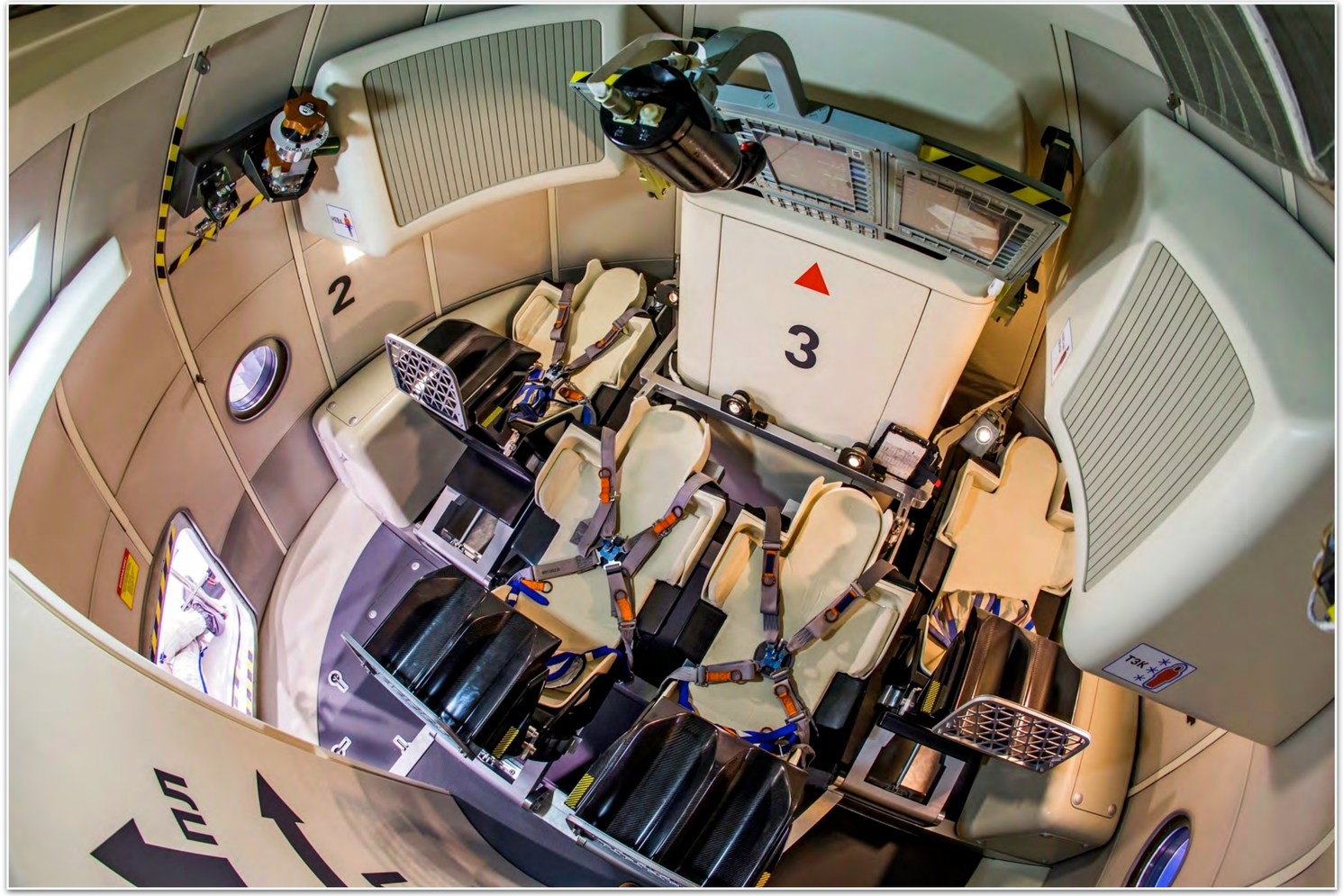




# PERSPECTIVE SPACECRAFT INTERIOR DESIGN

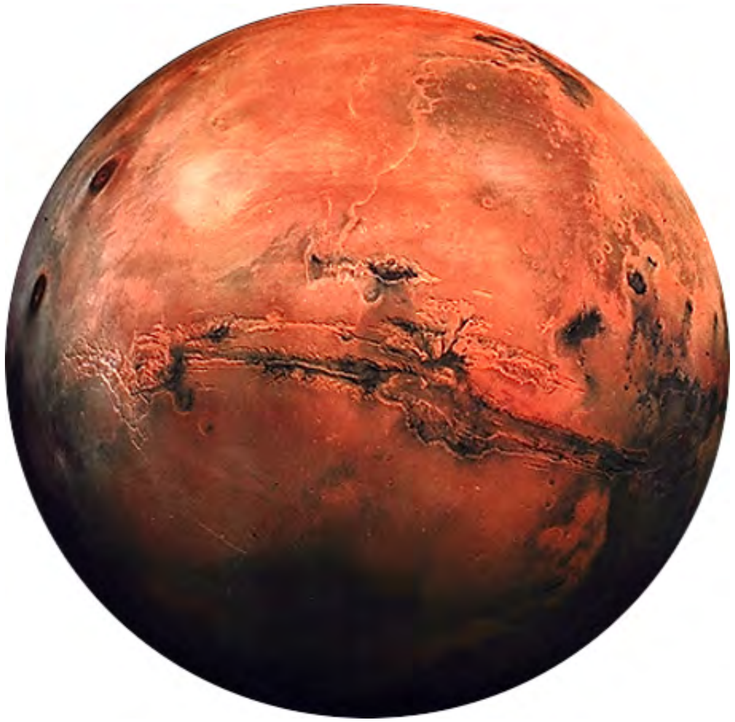


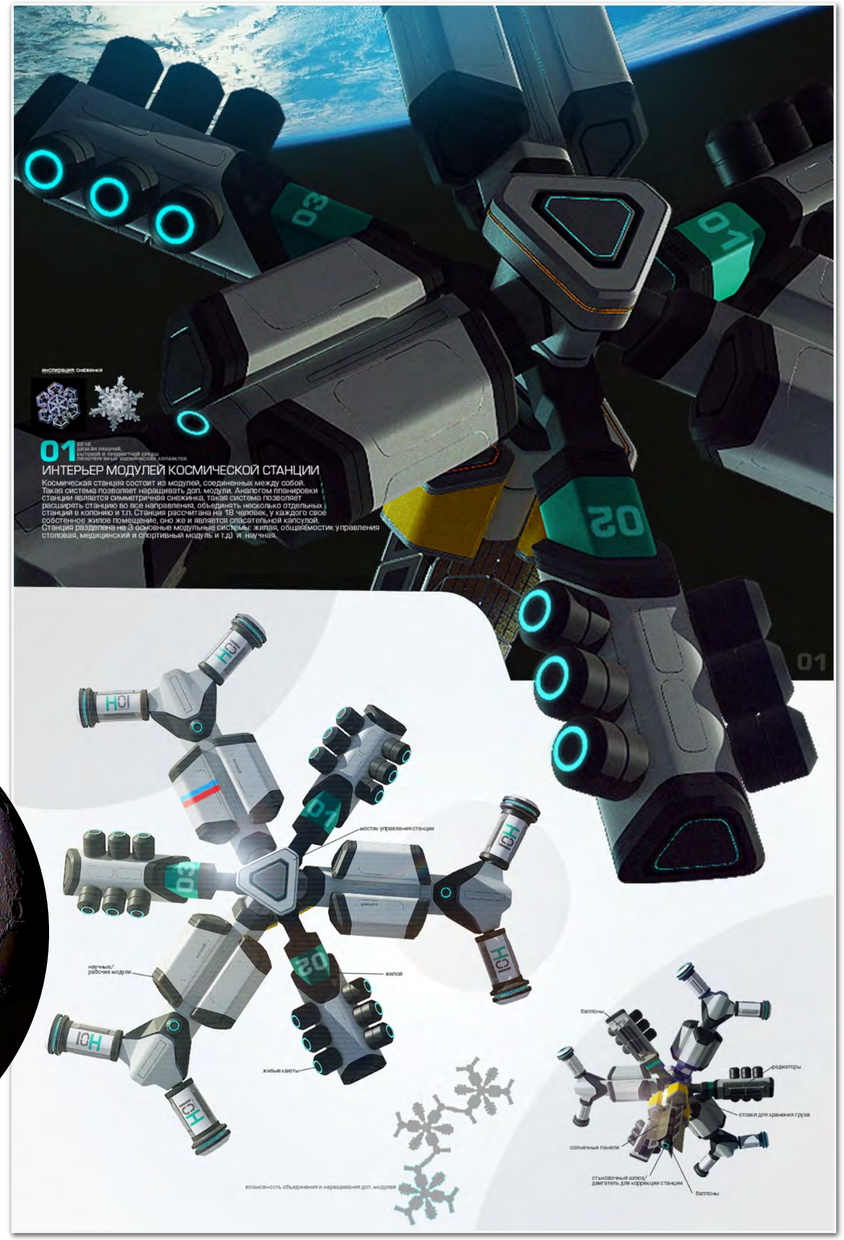




# ORBITAL & INTERPLANETAR CREW STATIONS

## INTERIOR DESIGN





# AIM

# ENGINEERING CENTRE

## ADVANCED COMPLEXITY PROTOTYPING

ASTRAROSSA | DESIGN

# DECISION LEVEL

THE PRESIDENT OF RUSSIAN FEDERATION
V.V.PUTIN 08/04/2013

PRIME MINISTER OF RUSSIAN FEDERATION
D.A.MEDVEDEV 05/02/2014

# LOCATION

## VERY CENTRE OF MOSCOW / GORKY PARK


## NATIONAL UNIVERSITY OF SCINCE AND TECHNOLOGY MISIS

## RUSSIA, MOSCOW, LENINSKY PROSPECT 4/2

# EDUCATION+PROTOTYPING

## MASTERS DEGREE

+

## ENGINEERING CENTRE / DIGITAL PRODUCTION


## CONCEPT

INDUSTRY 4.0 / DIGITAL PRODUCTION
TRENDS IN TECHNOLOGY / PROCESSES / MATERIALS
COMPLETE DIGITAL PROJECT CIRCLE
FUNCTIONAL INDUSTRIAL PROTOTYPES
CREATIVE ENGINEERS / INTERNATIONAL MASTERS DEGREE
INDUSTRY PROFESSIONALS UPGRADE
PRACTICAL SCIENCE & CREATIVE R&D
GLOBAL PROJECTS

## TECHNOPARK

| | |
|---|---|
| **TREND LAB** | TRENDS / TECHNOLOGY / PROCESSES / MATERIALS |
| **CAD LAB** | DESIGN / DIGITAL ENGINEERING |
| **FAB LAB** | DIGITAL PROTOTYPING / PRODUCTION «JUNIOR» |
| **WORKSHOP «PRO»** | DIGITAL LIMITED PRODUCTION «PRO» |
| **MEDIA LAB** | COMMUNICATION / MARKETING / MEDIA |

# PARTNERSHIP

Massachusetts Institute of Technology

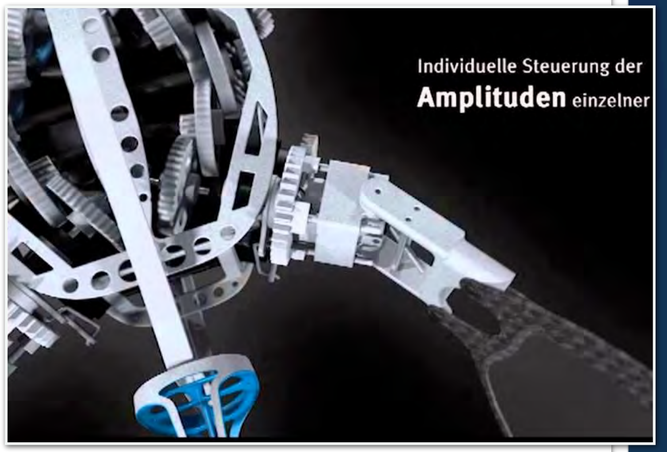

IED

Istituto Europeo di Design

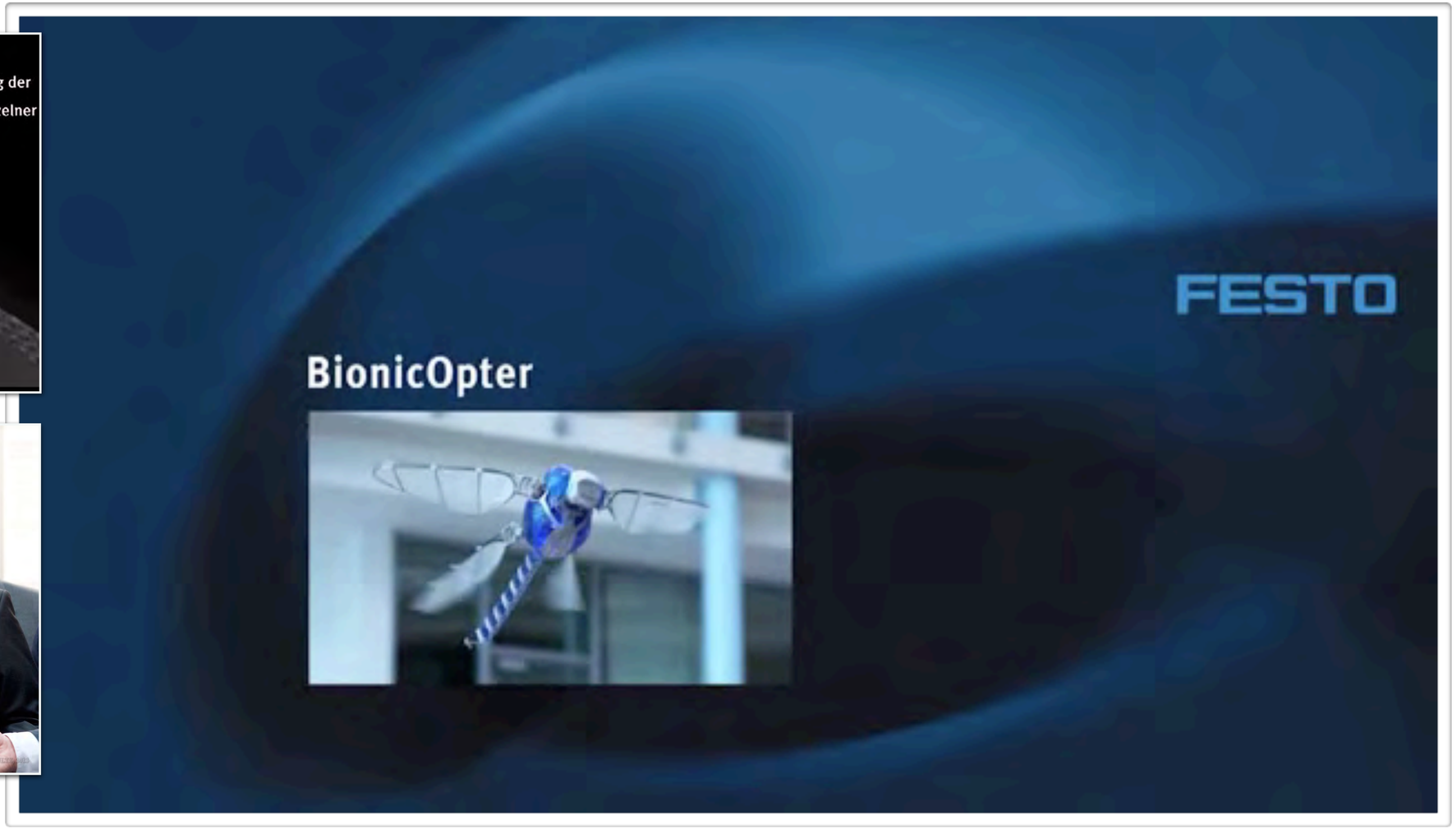

# AIM

# GLOBAL TRENDS / TENDENCIES

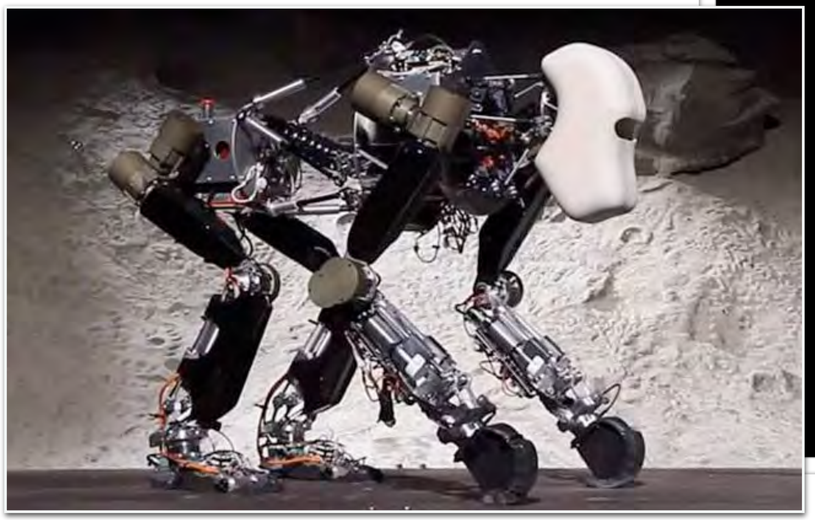
# BIOMORTHIC ROBOTS







# BIOMORTHIC ROBOTS



# UNLIMITED POSSIBILITIES

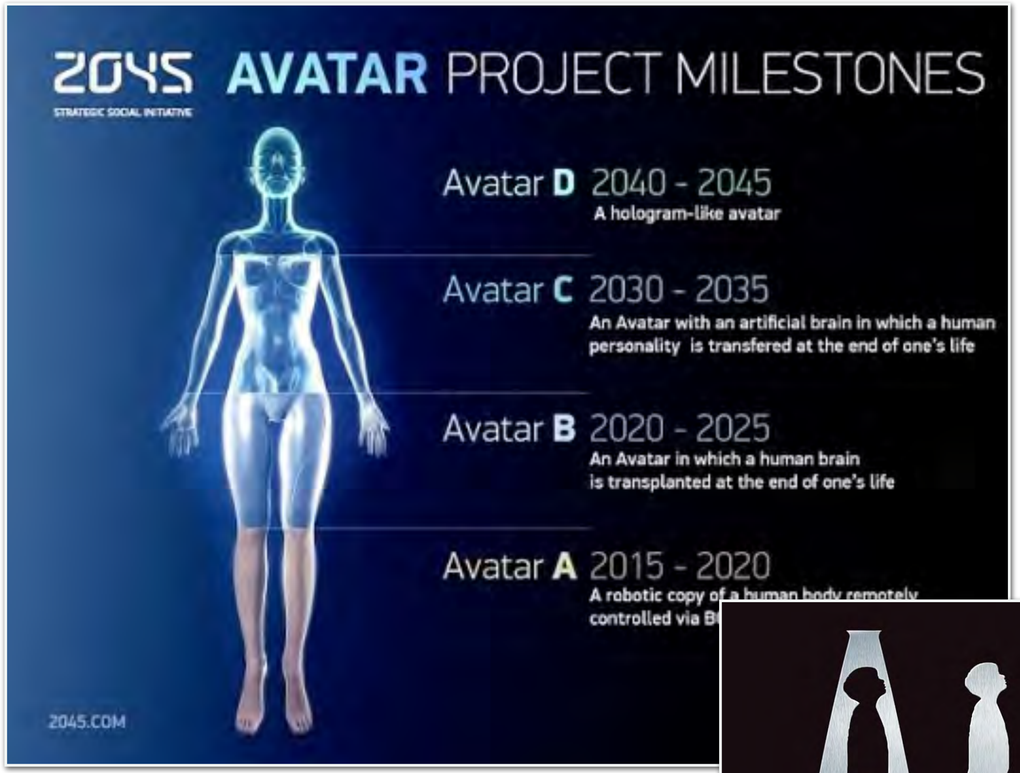
## 3D PRINTING DIGITAL PRODUCTION INDUSTRY 4.0

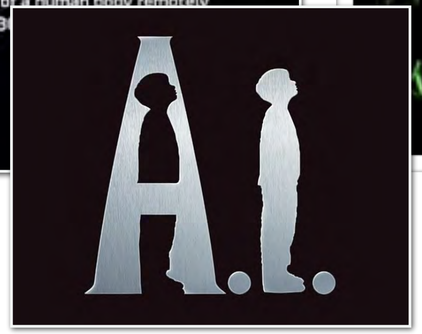

# UNLIMITED POSSIBILITIES

## 3D PRINTING DIGITAL PRODUCTION INDUSTRY 4.0

# UNLIMITED POSSIBILITIES

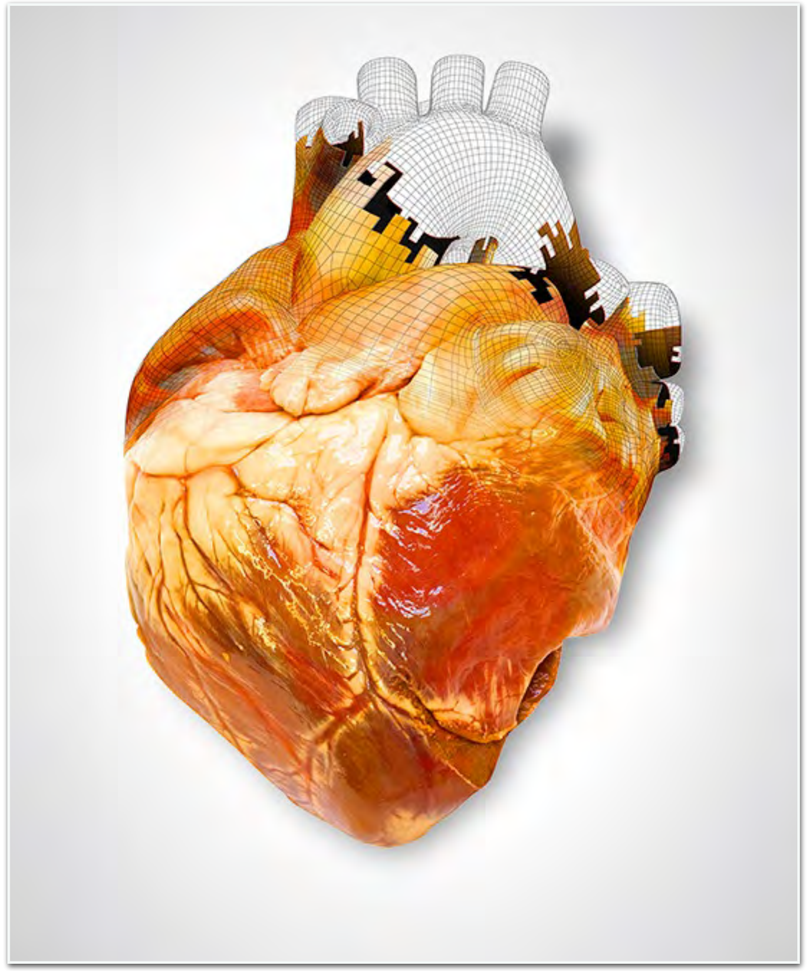
## ARTIFICIAL INTELLIGENCE / AVATAR



# UNLIMITED POSSIBILITIES

## 3D ORGAN PRINTING

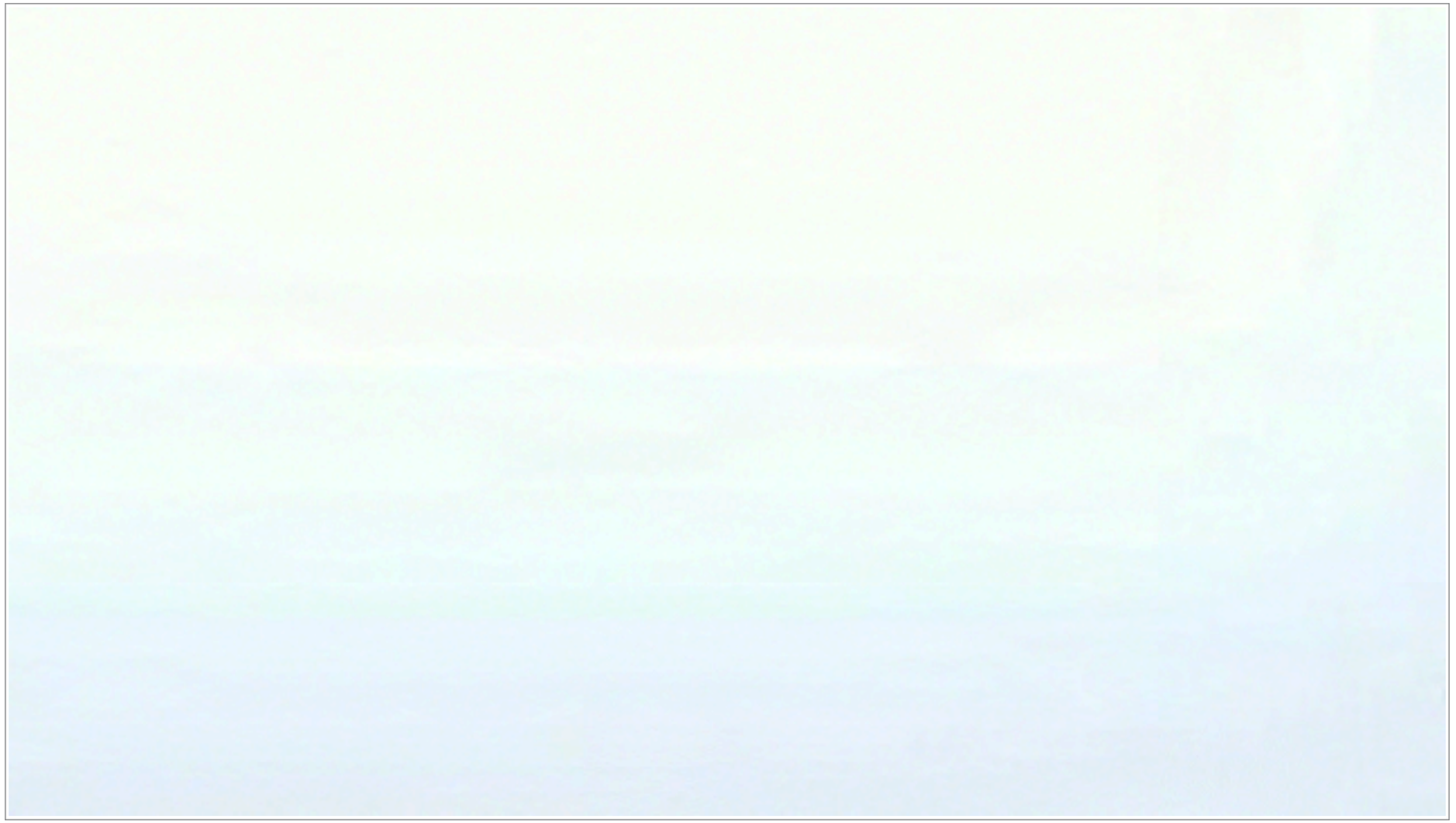


## MEDICINE OF THE FUTURE

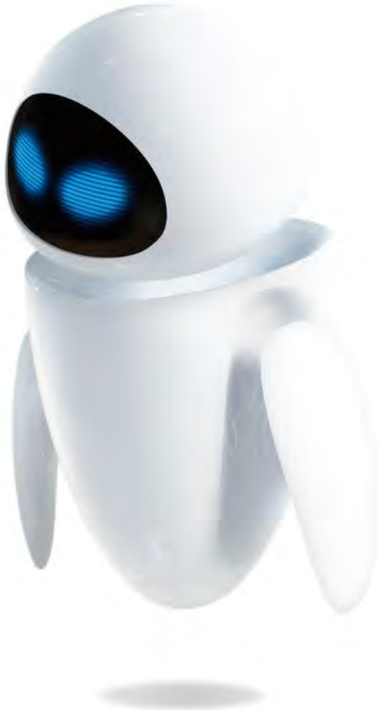
# THE FUTURE I WANT!

# THE FUTURE I WANT!

## IDEOLOGY FOR NEW GENERATION




WALL-E



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DESIGN

**www.astrarossadesign.com**