



European Union Energy Day

Clean energy solutions for the buildings
of the future

Astana EXPO, 24 July 2017

#EUenergyday



Euenergyday.eu





Machines-3D
Organisation



Founder :



**Target in Life : Bring solutions of
Third Industrial Revolution**

Inspiration

Real founder :



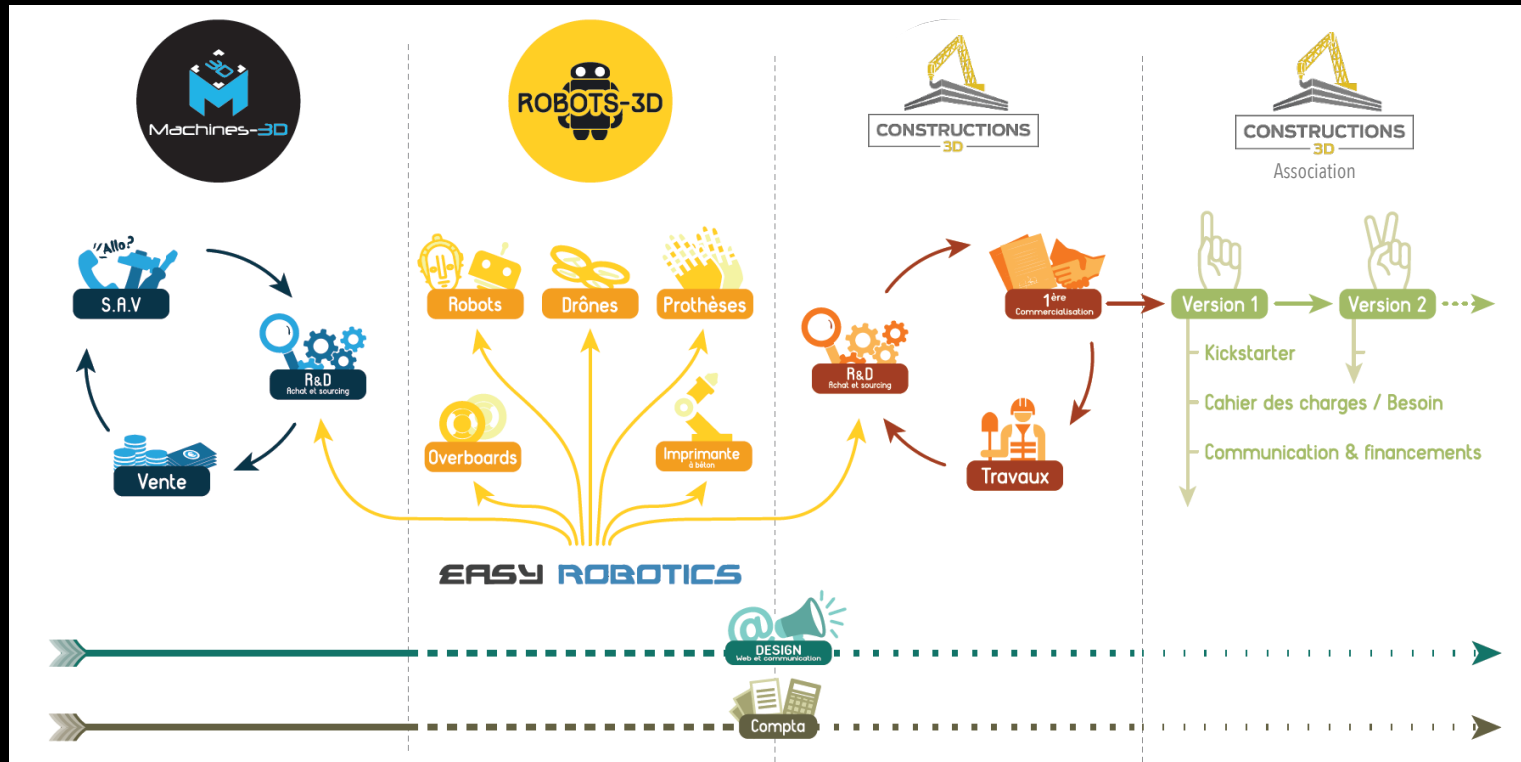
**Target in Life : Be happy and
share Happiness !**



Expertise : 3D Printing / Scanning



Merging Silos





Going to



THE
ZERO
MARGINAL COST SOCIETY



Machines-3D
Organisation

- ✓ — VALID FOR EVERY
- ✓ — SECTORS OF THE
- ✓ — ECONOMY !!!

Cost per Unit

Cost of
Prototype

3rd Industrial Revolution

Cost of
Series

2nd Industrial Revolution

ZERO
MARGINAL
COST

- Materials
- Energy
- Ideas

Cost of
Series

Number of Units



VIRTUAL WORLD



Unlimited Storage
Available Everywhere
No cost and time for transfer



RENEWABLE ENERGY



REAL WORLD

ZERO MARGINAL COST SOCIETY

Impact on the Economy

'DIGITALISATION' Internet of Data

- Camera, phones
- Sensors of all kinds
- Apps
- Connected Objects
- 3D Scanners
- BIM

'3D PRINTING' Internet of Things

- 3D Printers
- Robots
- Connected Objects

Birth of Speaker

Today

Expected Death



Construction 3D Printing

Mass construction
of innovative, affordable
sustainable structures

Constructions-3D

3D Printing has revolutionized all forms of manufacturing



Ease of Customization



Increased Production Speed



<http://www.javelin-tech.com/3d-printer/applications/manufacturing-end-use-parts/>

Topological Optimization



<http://www.3dnatives.com/optimisation-topologique-3d-07032016/>



Why in Construction ?

It is even an ideal target ...

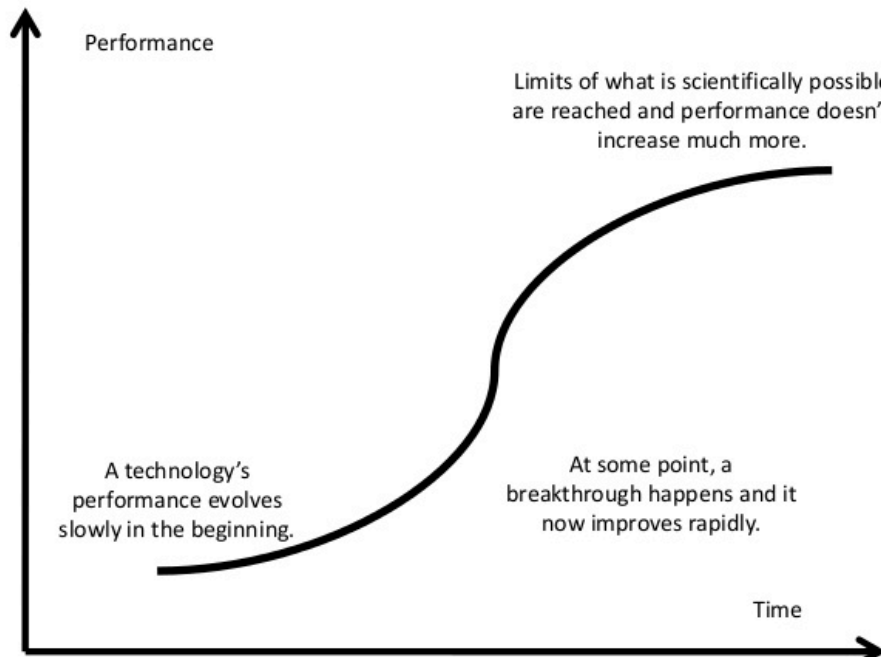
- Centuries-old processes with archaic modes of management that is unable to see the iceberg
- Difficulty to serialize in the model of the Second Industrial Revolution
- An old economic and environmental model concentrating 1/3 of the energy consumption on the planet with a need for change
- A lack of knowledge of digitalization by the conventional actors
- Demands for new solutions of massive construction coming from exponential population growth and migrations / climate change

Constructions-3D



Why in Construction ?

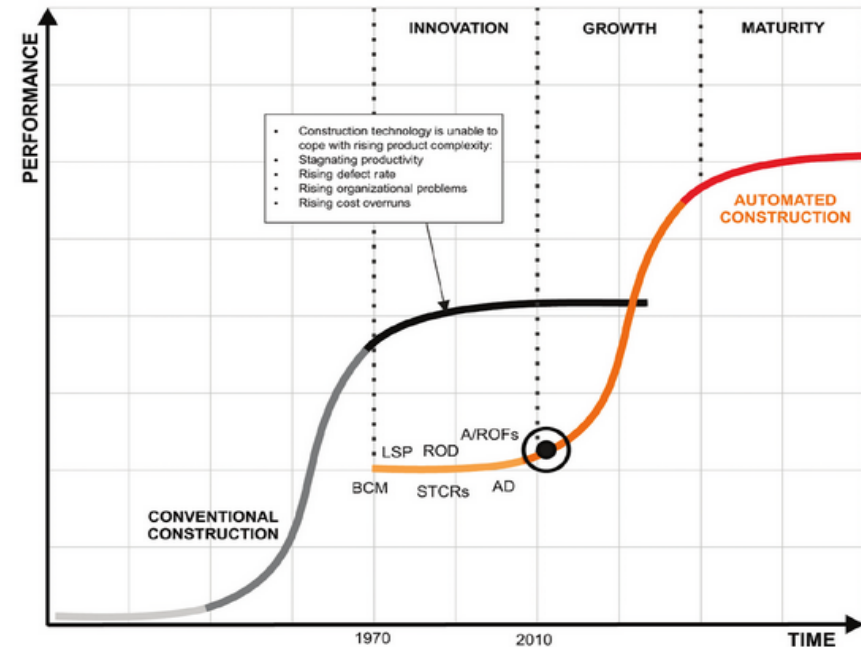
It is even an ideal target ...



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The Origins of Automated Construction and Its Disruptive Nature

7

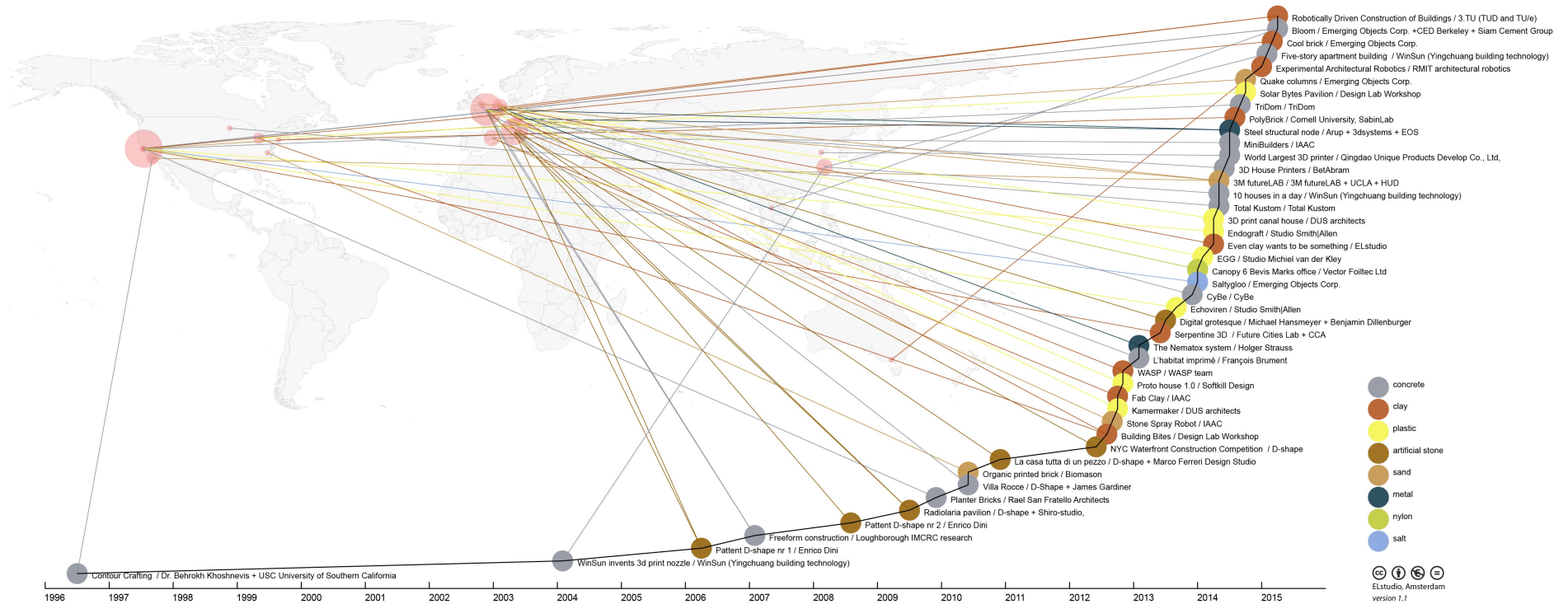


Source Thomas BOCK : Robot-Oriented Design: Design and Management Tools for the Deployment of Automation and Robotics in Construction



Why in Construction ?

List of 3D Construction Projects and localisation





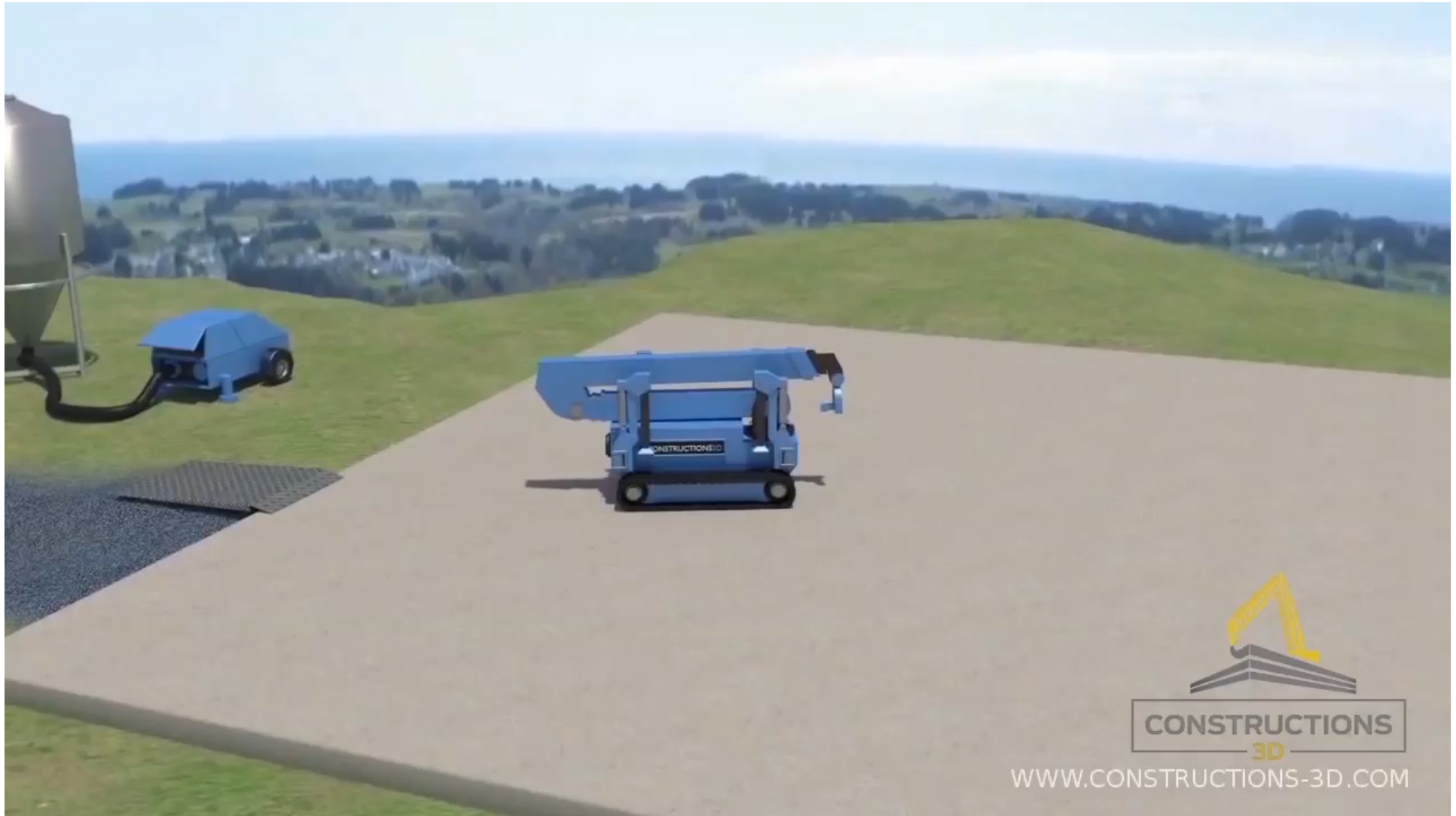
CONSTRUCTIONS
3D



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[#EUenergyday](https://twitter.com/EUenergyday)



WWW.CONSTRUCTIONS-3D.COM

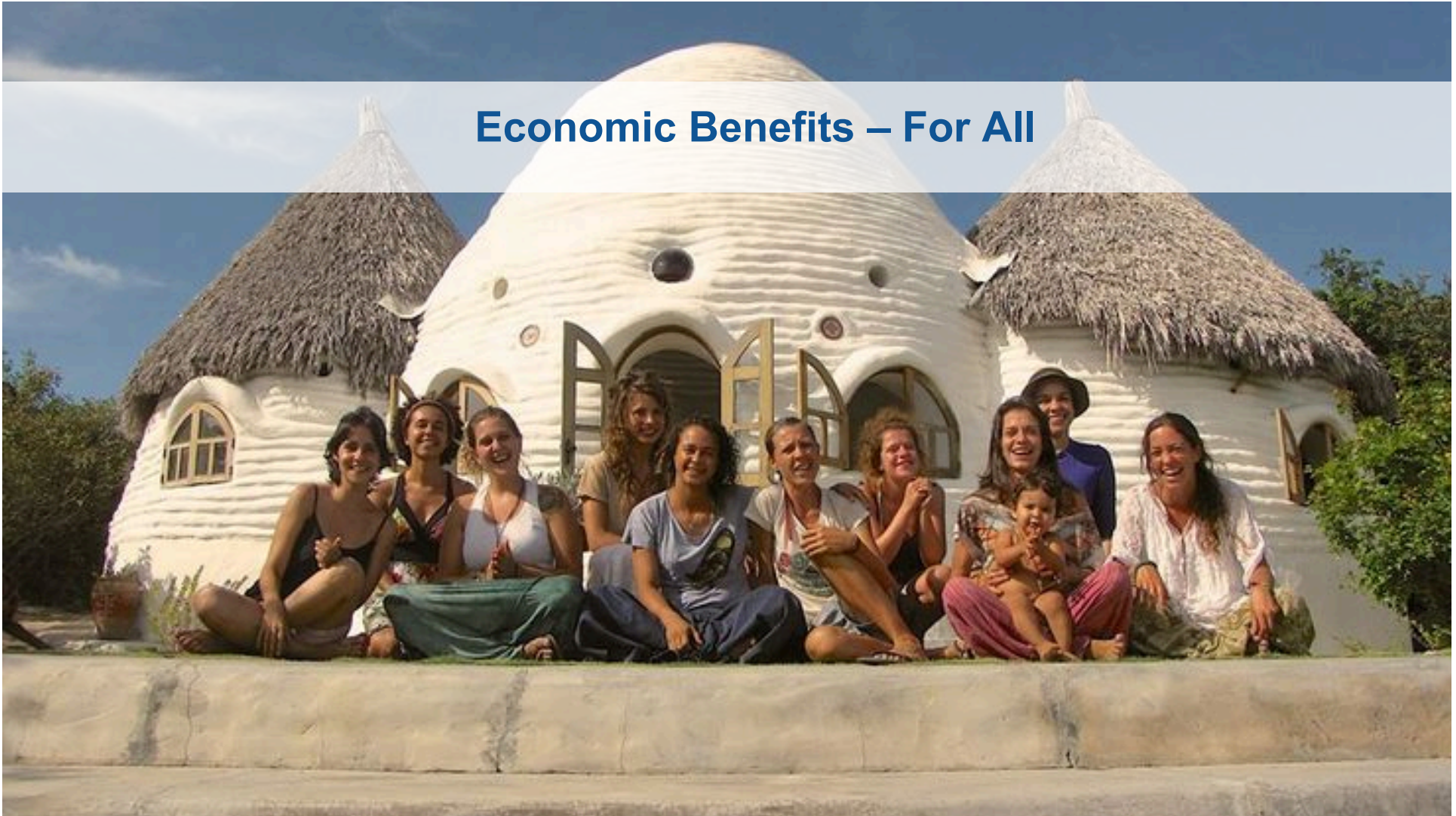


CONSTRUCTIONS
3D

**What is interesting with
Constructions-3D ?**

Constructions-3D

Economic Benefits – For All



Economic Benefits – For us and our Region





Constructions-3D has the following set of objectives:



TOPOLOGICAL OPTIMISATION

(Material needs reduced up to 50%, better insulation...)



ARCHITECTURAL REVOLUTION

(Overcome the constraints of the current tools in the construction industry...)



COST EFFICIENCY AND ACCESSIBILITY TO MANY

(cost divided by 10...)



TIME GAINED

(Printing in situ, 24h=1 house...)



Reduced Ecological Impact

(Reduced carbon footprint, less transports, local material when possible...)

Constructions-3D



CONSTRUCTIONS
3D



TOPOLOGICAL OPTIMISATION

*(Material needs reduced up to
50%, better insulation...)*



Constructions-3D



CONSTRUCTIONS
3D



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www.constructions-3d.com



**TIME
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Constructions-3D

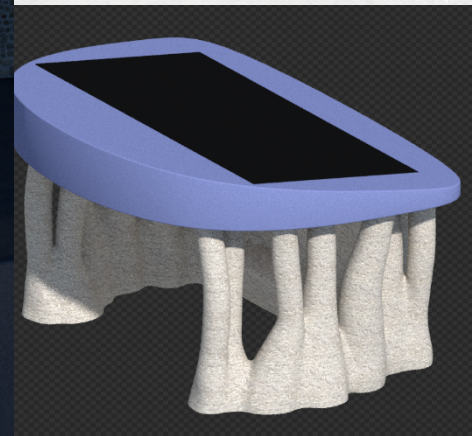


CONSTRUCTIONS
3D



ARCHITECTURAL REVOLUTION

*(Overcome the constraints of
the current tools in the
construction industry...)*



Constructions-3D



CONSTRUCTIONS
3D



Nader KHALILI – Sandbag Shelter - CALEARTH



Reduced Ecological Impact

(Reduced carbon footprint, less transports, local material when possible...)

Constructions-3D



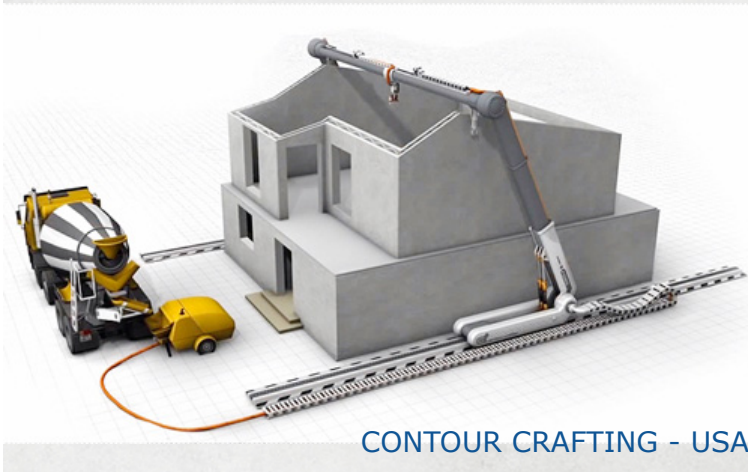
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WINSUN - China



WASP - Italy

Parallel Projects...



CONTOUR CRAFTING - USA



APIS COR - Russia





FFB – 24H du bâtiment
06 Octobre 2017
PARIS

Future Events



MACHINARIUM 2 – Official Presentation
27 and 28 Octobre 2017
VALENCIENNES



Waiting for your question in the Open Forum or by e-mail
info@constructions-3d.com



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