



“Supply and Demand” – Technology and Skills being utilised in Digitising Project Delivery.

Presented By: David Purdon , BIM/AEC Technical Consultant, Diatec



Agenda:

- Introduction.
- The State of Play in the industry – Global Trends.
- Technology Trends – New Skills and Workflows being adopted.
- The ERA of Connection



Introduction.

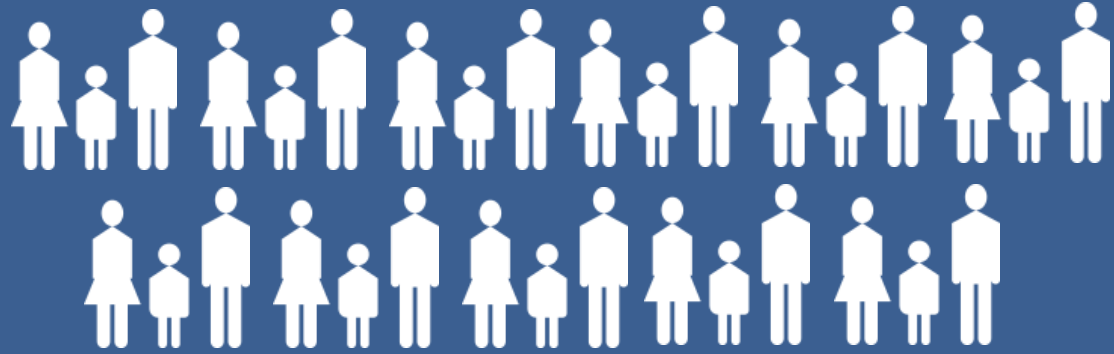


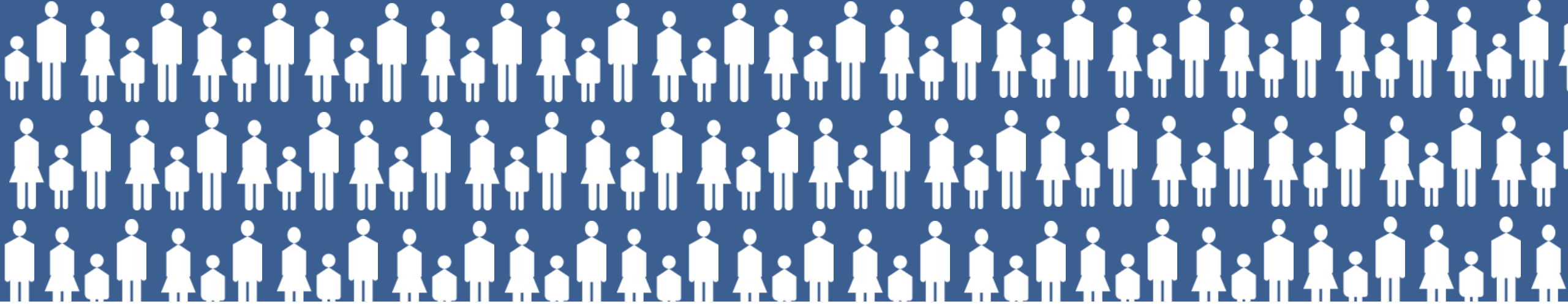
- Diatec are Irelands largest Autodesk Channel Partner.
- Offices In Dublin, Galway and Cork.
- Only Partner in Ireland recognised as Autodesk Construction Specialised.
- Specializing in BIM Implementation with technology adoption and workflow rollout.
- Technology Specialists across many sectors of Architecture, Engineering and Construction.

www.diatec.ie

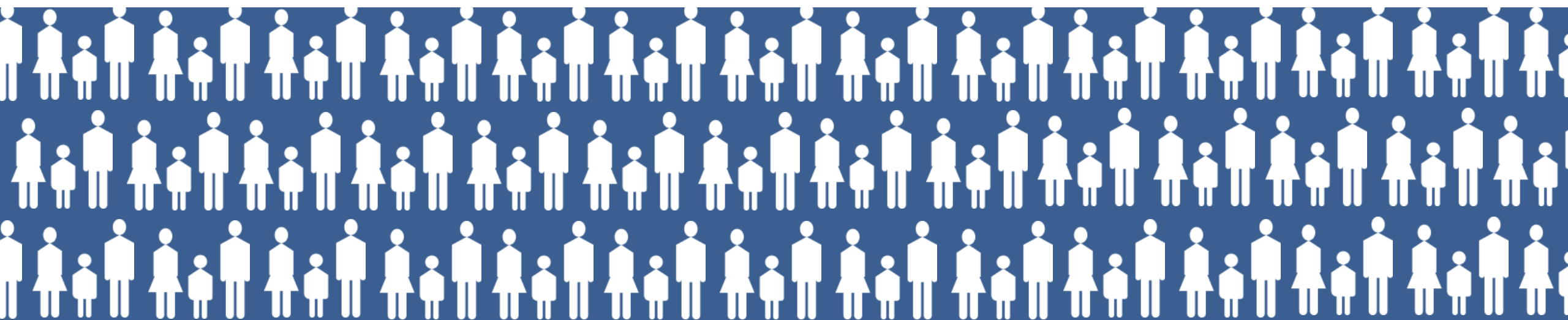
GLOBAL TRENDS







9 BILLION IN 2050





1,000
per day



\$3.3T
per year





Low Margin

High Risk

Fragmented





Analog



5 Wholesale Trade

6 Manufacturing

...

18 Government

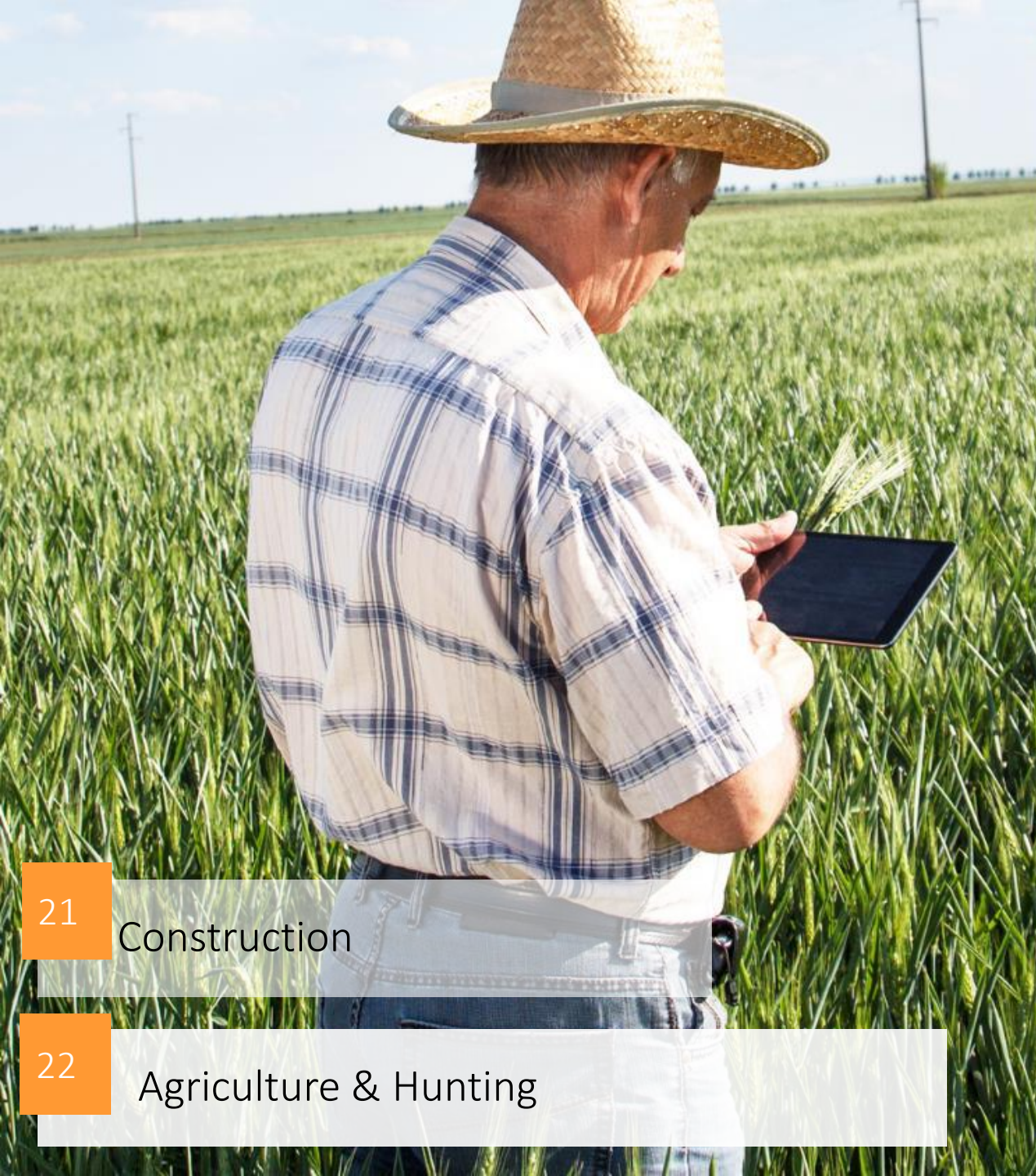
19 Healthcare

20 Hospitality

21 Construction

3.3% Investment

1.2% Investment



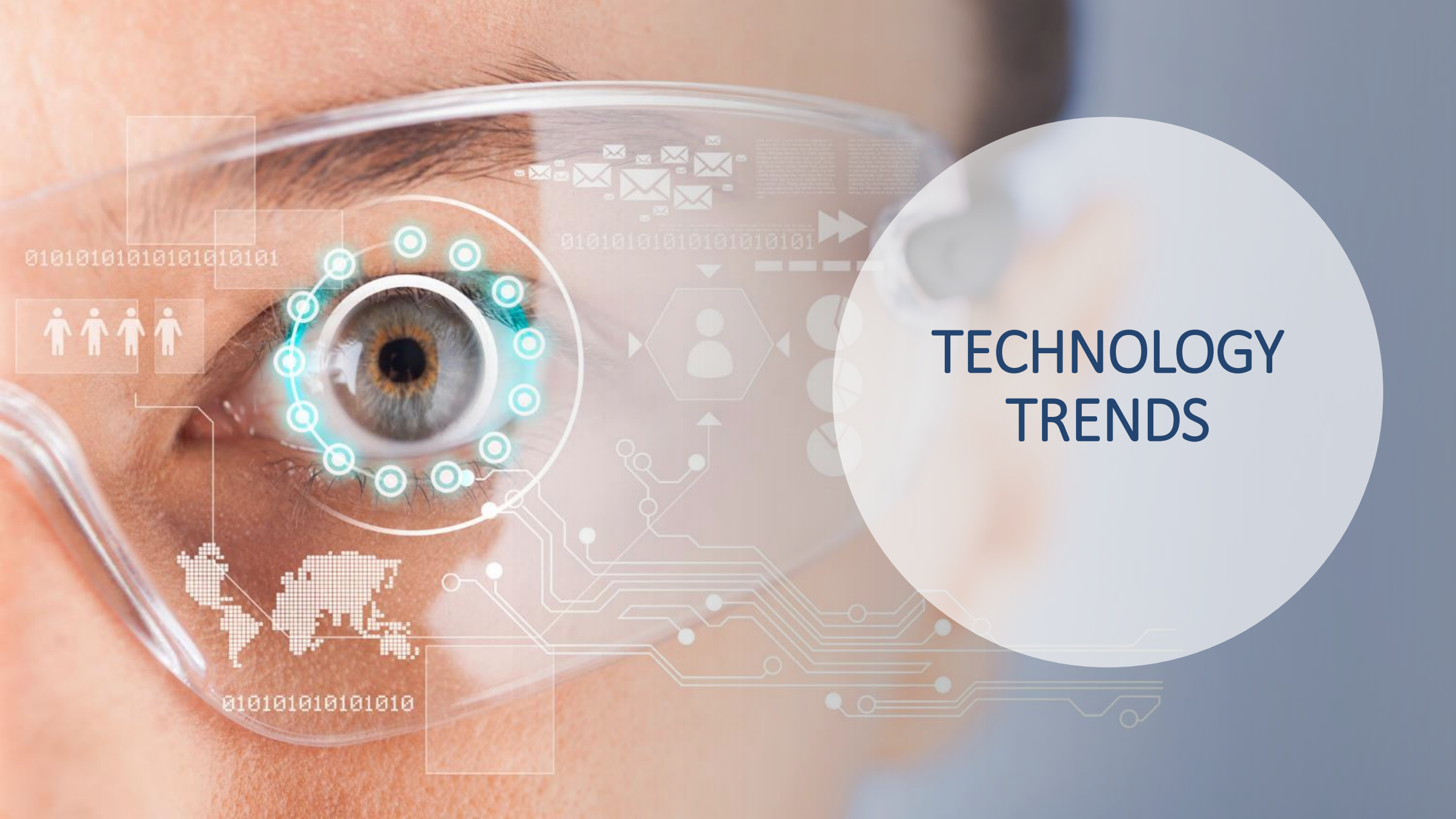
21

Construction

22

Agriculture & Hunting



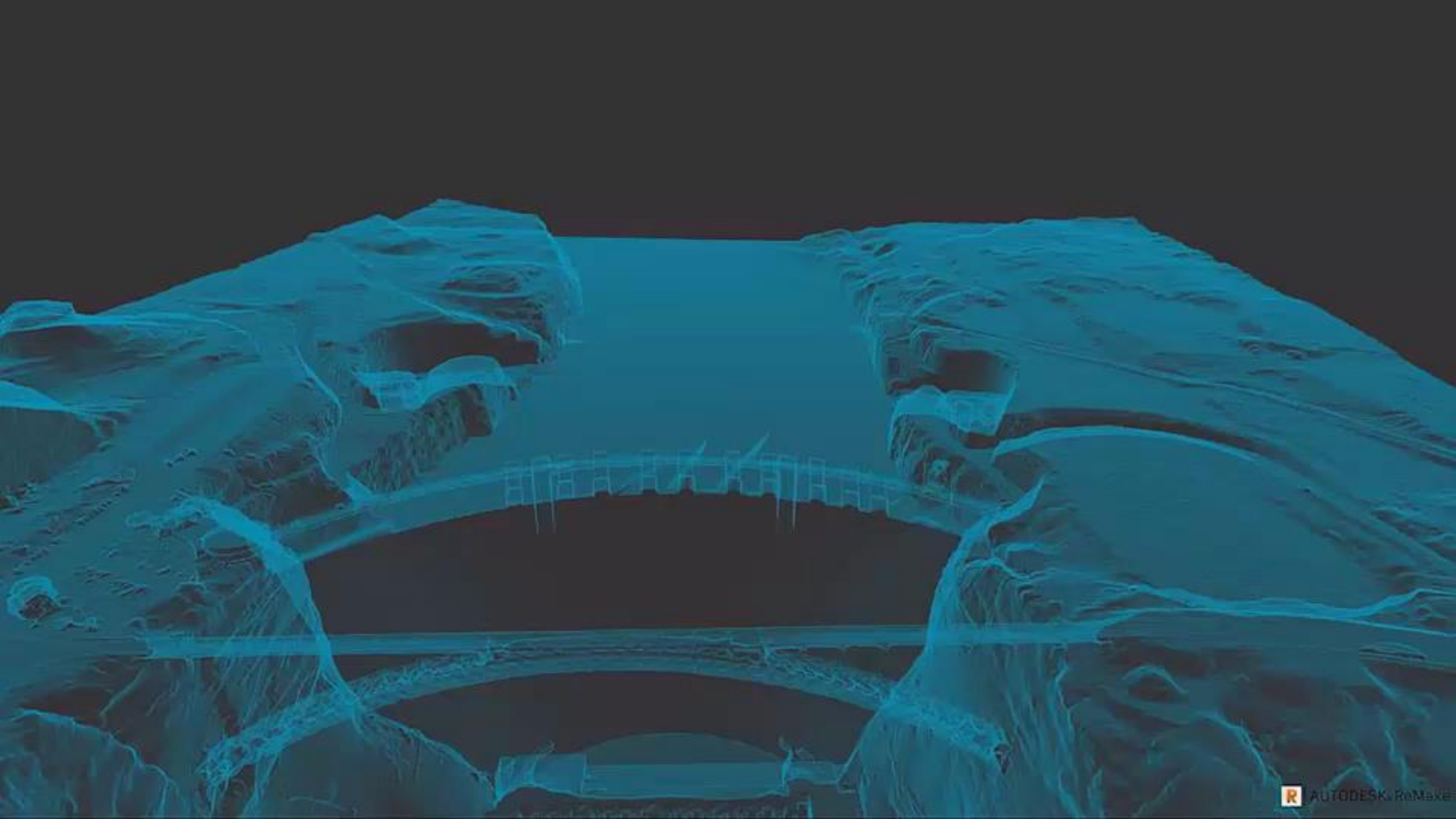


TECHNOLOGY TRENDS



1

Higher Definition Surveying



2

Machine Learning

2F: Views to outside maximizes exterior views from paths



DESIGN OPTION 9_59



GENERATIVE DESIGN FOR ARCHITECTURE

1. GENERATE

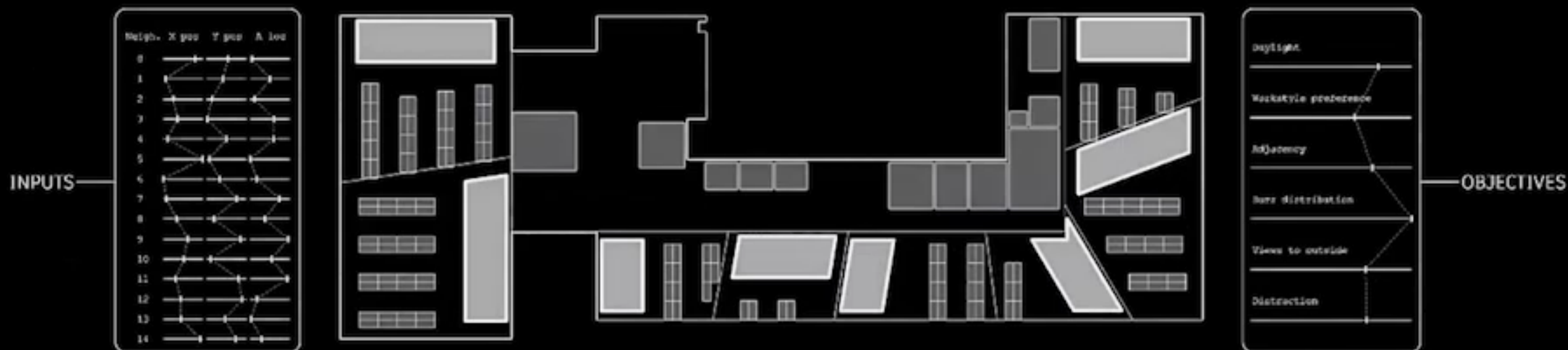
2. EVALUATE

3. EVOLVE

4. EXPLORE



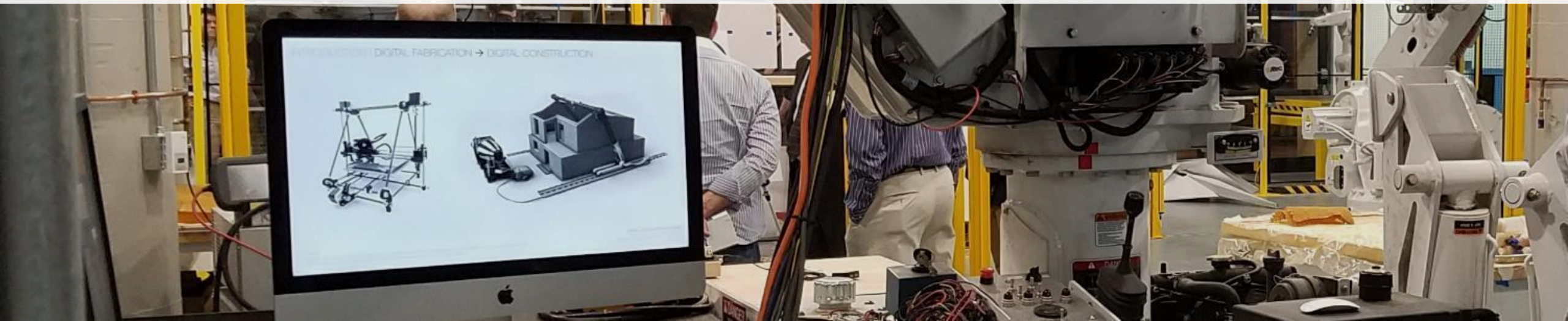
1E: This geometric system can **generate thousands of design options** by varying a few input parameters.

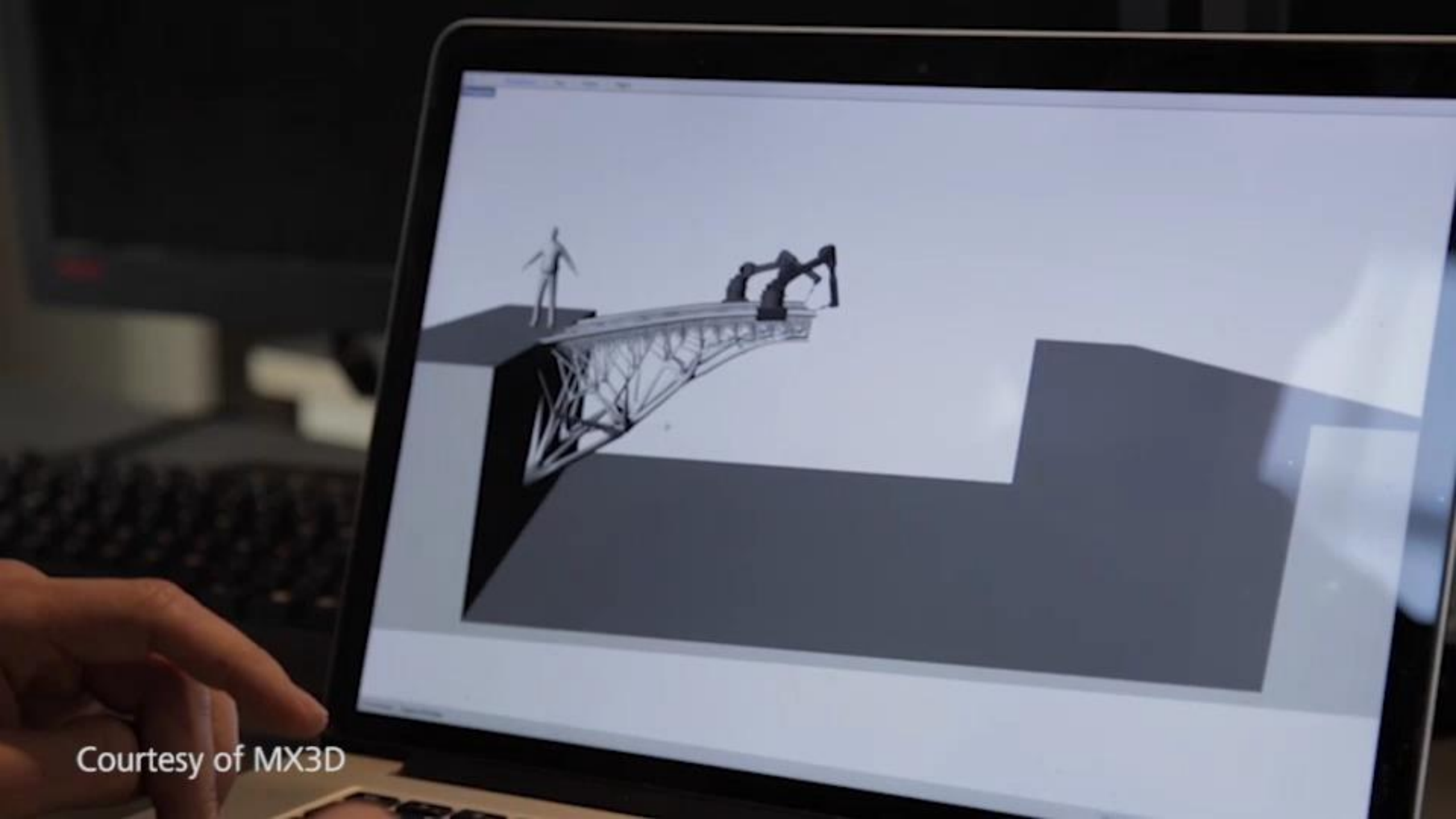




3

Industrialization of Construction





Courtesy of MX3D

4

Digital Collaboration



Style

People

Home

Views



Undo

Redo

Orbit

Tap&Go

Sun

Info

Settings

VR



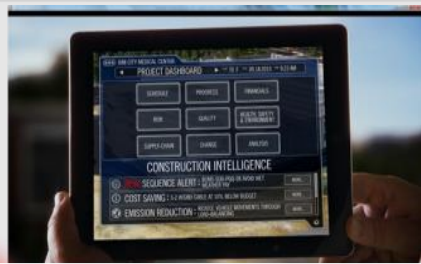
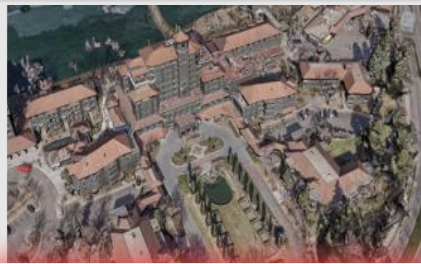
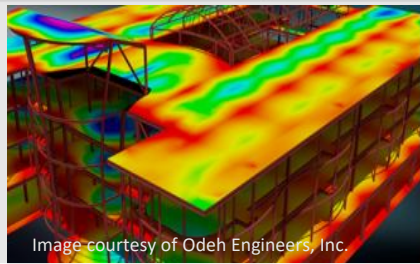
5

The Internet of Things & Advanced Analytics



ID: OCCUPANT





The Era of Connection

Source: FARO



ERA OF DOCUMENTATION

Introduction of AutoCAD



ERA OF OPTIMIZATION

Building Information Modeling (BIM)



ERA OF CONNECTION

Connected BIM workflows
across the project lifecycle





DESIGN

BUILD

CONNECTED BIM

OPERATE

BIM plus the power of the cloud



Collaboration



Continuity



Insight



Rambøll Sweco ANS InterCity Sørli-Brumenddal

Norwegian Railway – High speed Rail

120

Connected 120 stakeholders for design approvals

14 days

InfraWorks used continuously for project reviews every 14 days

20%

BIM in planning resulted in 20% time savings

Nihon Sekkei Joetsu Aquarium

Japan

Sim

...Direct from Revit. No need to make separate model

CFD

Heat and flow simulation enables life across 3500 species

3D model

...printed from Revit and part of exhibition



The Buchan Group Castle Towers Stage 3 Redevelopment

Australia

7

Global offices
with 45 designers
working around
the clock

IT

Reduced costs
due to zero
infrastructure

Ecosystem

Extended design
teams adopt BIM
360 Team



Mortenson US Bank Stadium

Minneapolis, United States

60,000

3D points linking BIM
model elements to
physical equivalents

20,000

Items managed through
BIM 360 Field

6 weeks

Project completion
ahead of schedule



The Future of Making Things



CitA
BIM GATHERING



Thank you

David Purdon, BIM/AEC Technical Consultant, Diatec.