Defragmenting the Construction Industry

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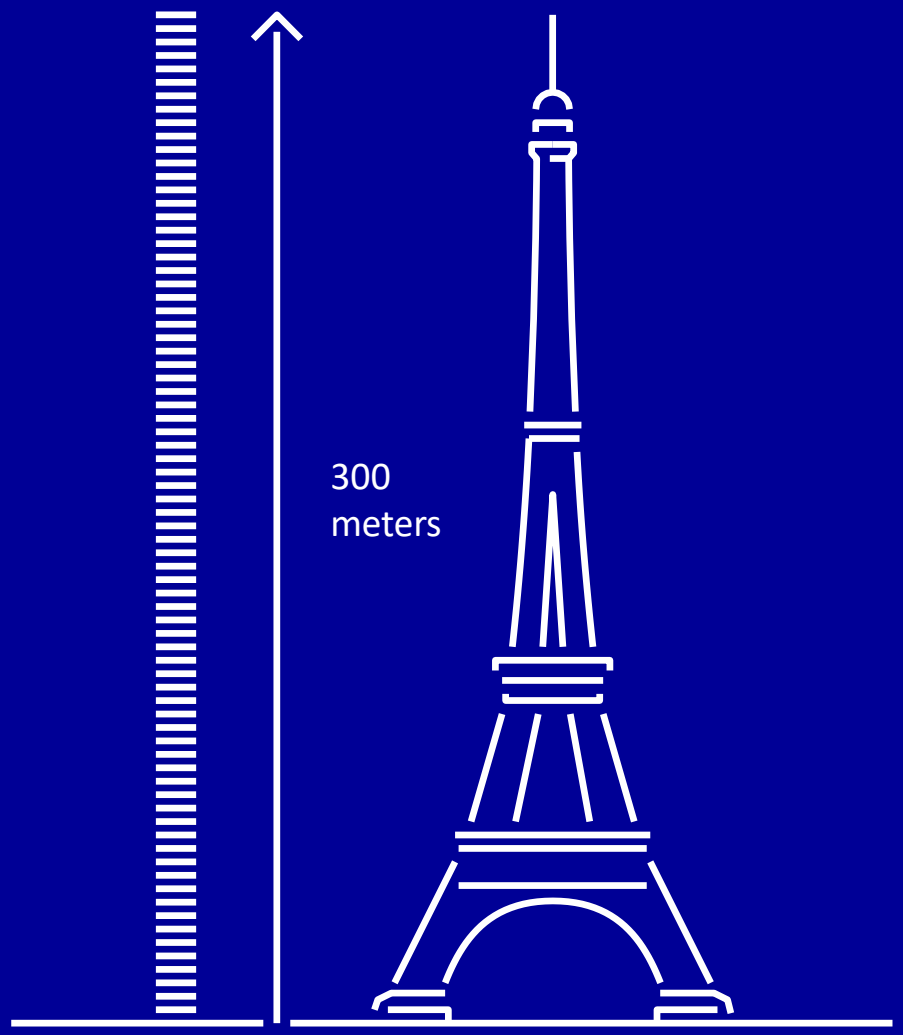
a modest country that extends beyond its borders

+ population: 1.3 million
+ area: 45,339 km2
+ currency: Euro
+ member of: EU, NATO, WTO, OECD, DIGITAL 9
+ ICT sector: 7% of GDP

we are a digital society

+ ‘the most advanced digital society in the world’ –WIRED Magazine
+ 99% state services are online
+ digital signatures save 2% of GDP
+ a few hours to start a company
+ hassle-free e-taxation



A stack of paper saved each month

building registry

National database for all buildings

- + over 3 million data requests monthly via e-government services
- + over 32k procedures handled yearly
- + 400GB database
- + 2.8 million documents

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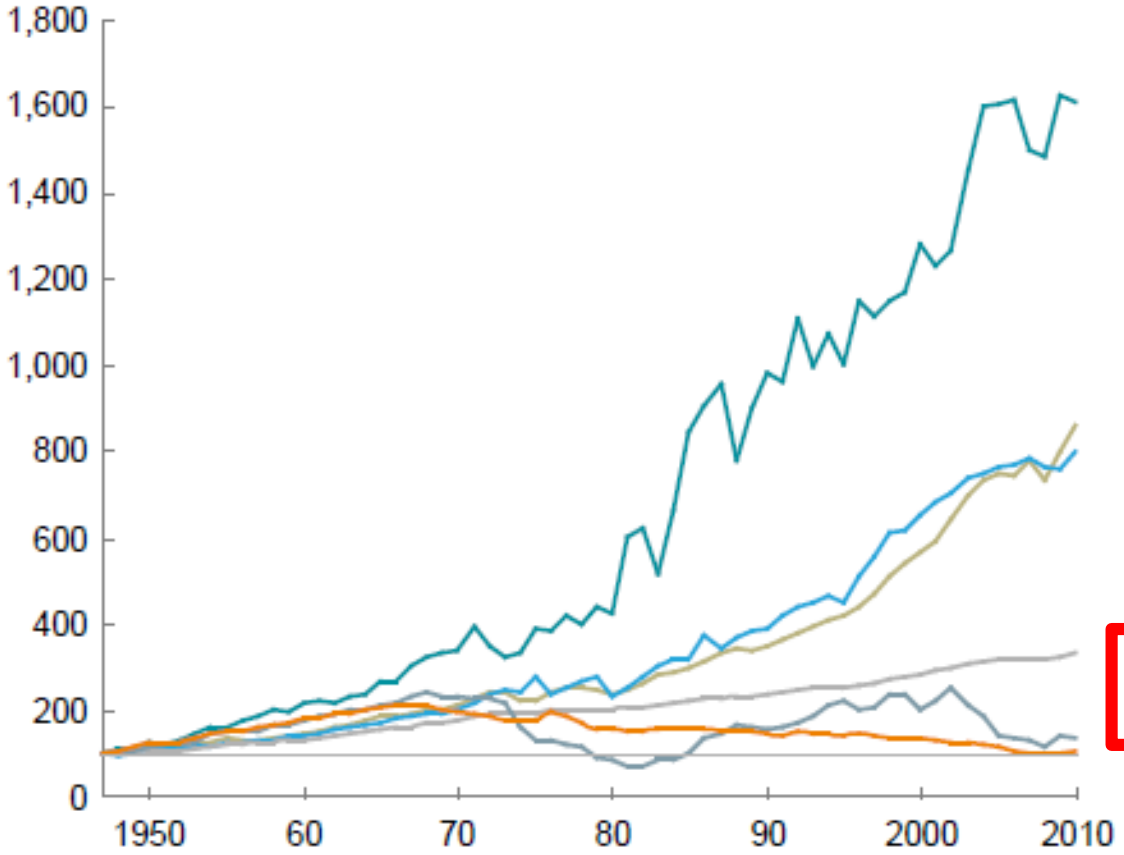
where is the problem?

Gross value added per hour worked, constant prices
Index: 100 = 1947



	Compound annual growth rate, 1947–2010 %	Total change
Agriculture	4.5	16.1x
Manufacturing	3.5	8.6x
Wholesale and retail	3.4	8.0x
Overall economy	1.9	3.3x
Mining	0.5	1.4x
Construction	0.1	1.1x

complexity

+ Large amount of stakeholders
+ Fragmented nature of the industry
+ Long building lifecycle
+ least digitized

role of government

Legislation

Direct and influence adoption of new solutions using relevant legislation

Process improvement

Map and improve existing processes, support adoption of new tools and methods

Education

Develop educational curriculums and government orders to develop skills for innovative

Create the environment for secure and reliable data exchange

>> e-construction platform

e-construction platform

lossless exchange of standardized and trustworthy data between all stakeholders throughout the building lifecycle

+ Better data management = improved decision making
+ BIM becomes the norm
+ more efficient and transparent public processes
+ added value from new digital products and services

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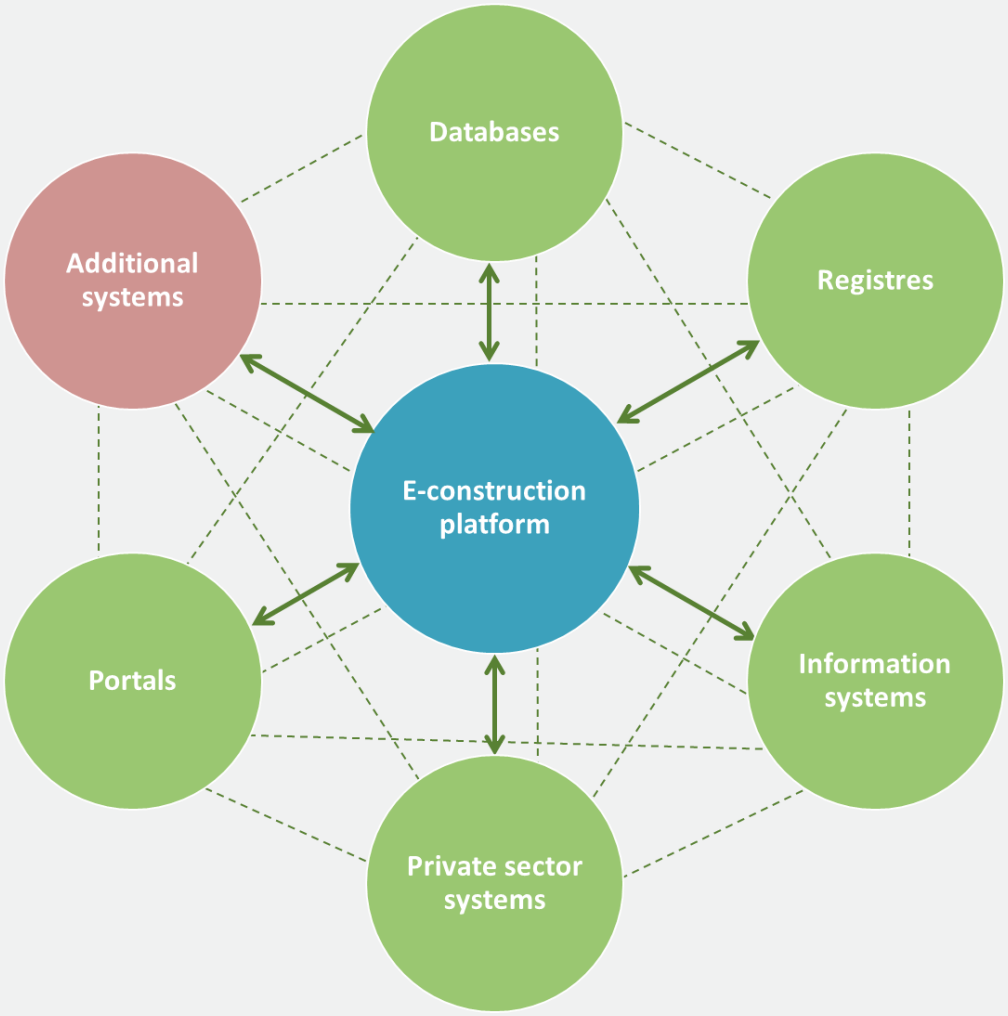
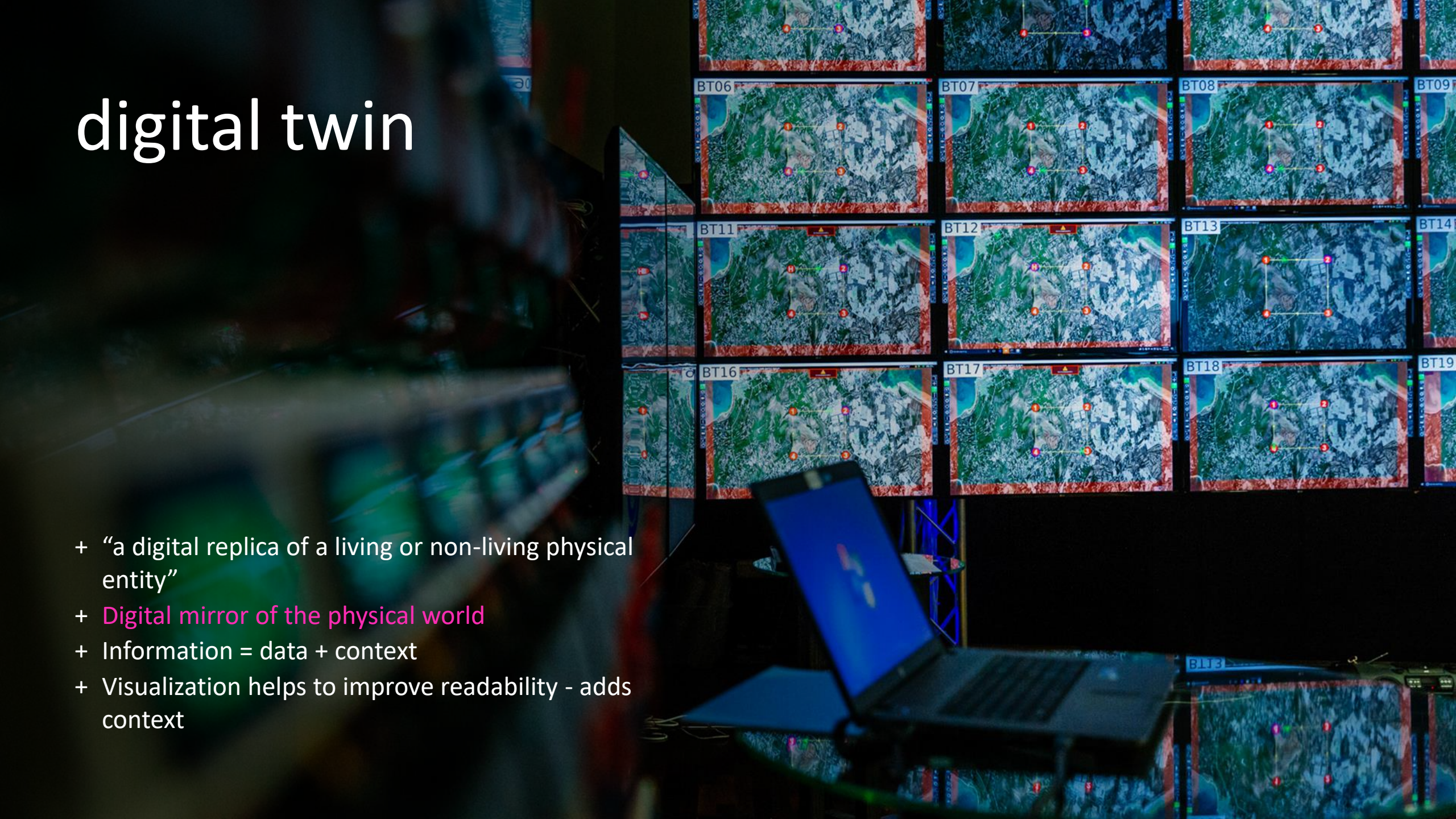
integration

connecting built environment data and services without a centralized or master database



+ using existing e-gov infrastructure (x-road)
+ open platform and API-s
+ secure by design with e-ID authentication
+ KSI blockchain used for integrity verification of government registries
+ access point to digital twin

digital twin



+ “a digital replica of a living or non-living physical entity”
+ Digital mirror of the physical world
+ Information = data + context
+ Visualization helps to improve readability - adds context

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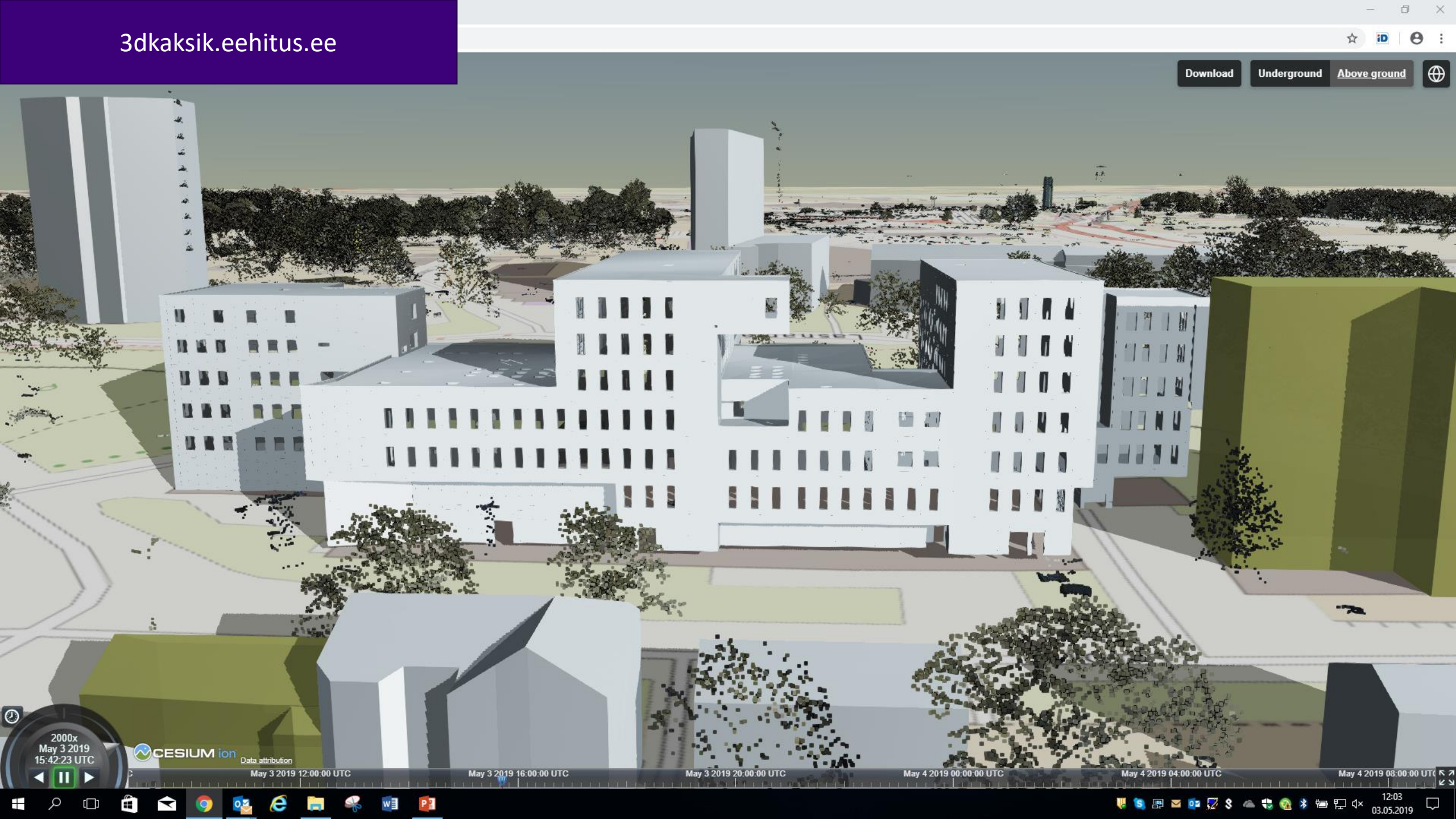

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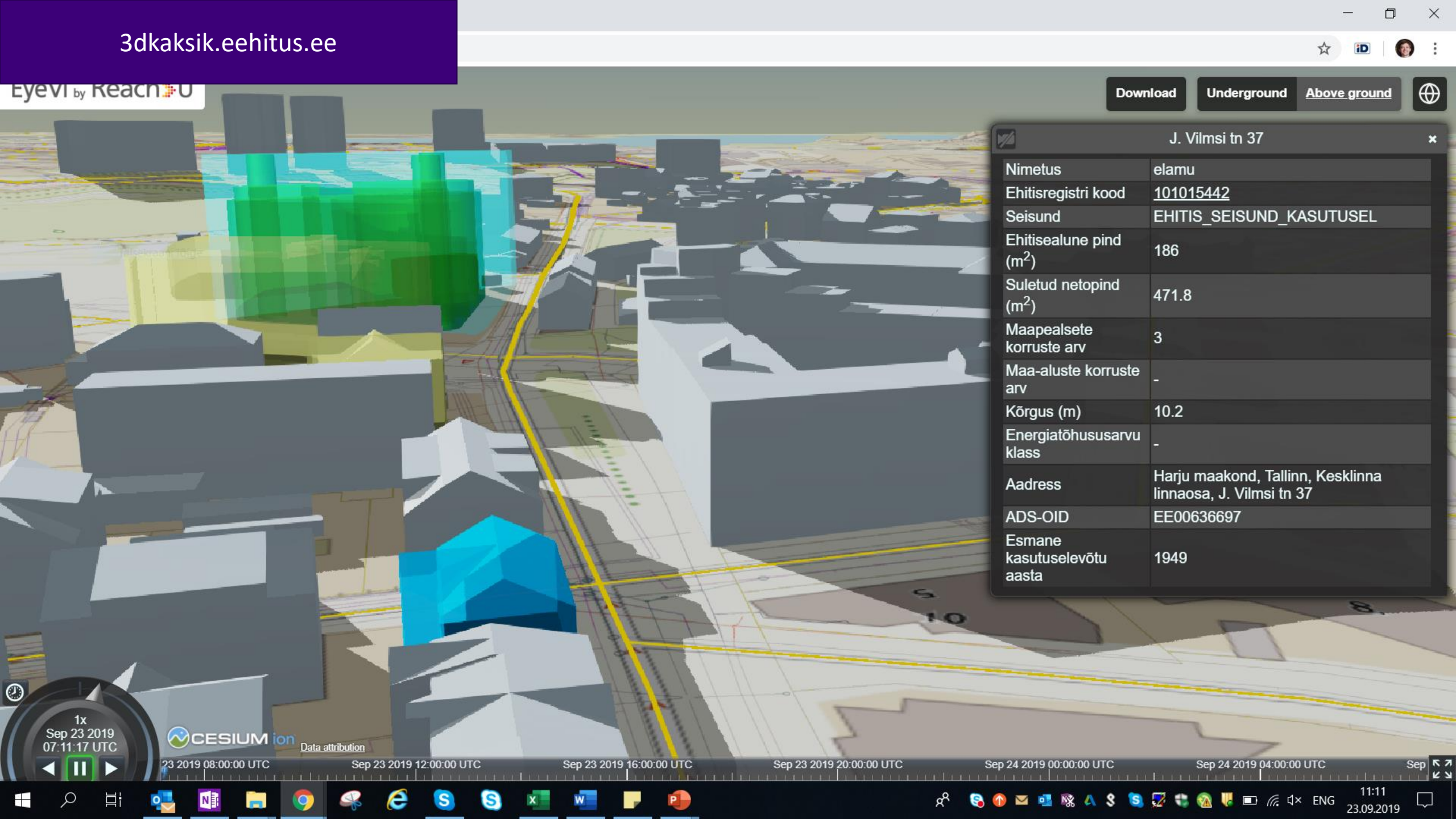

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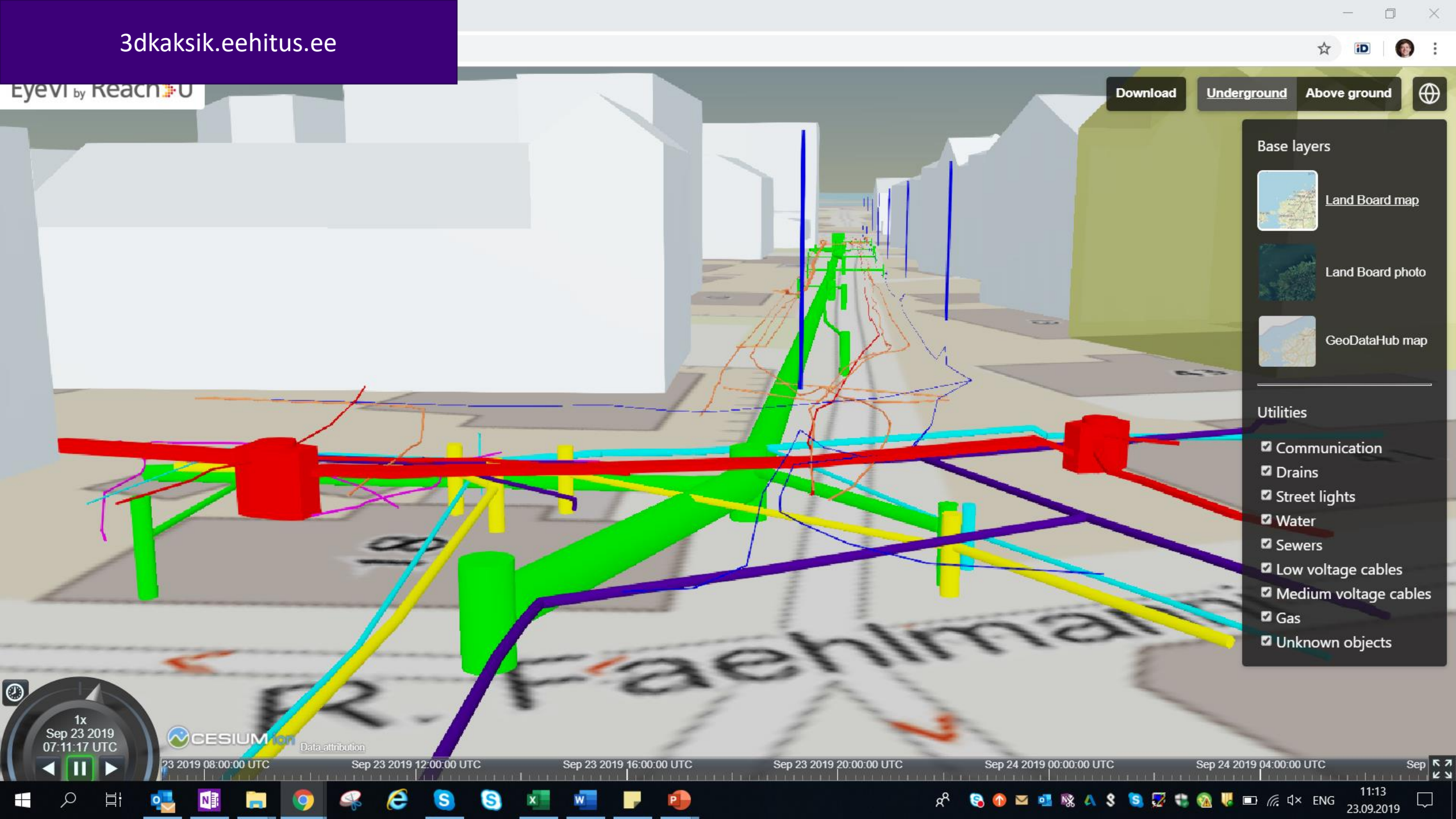
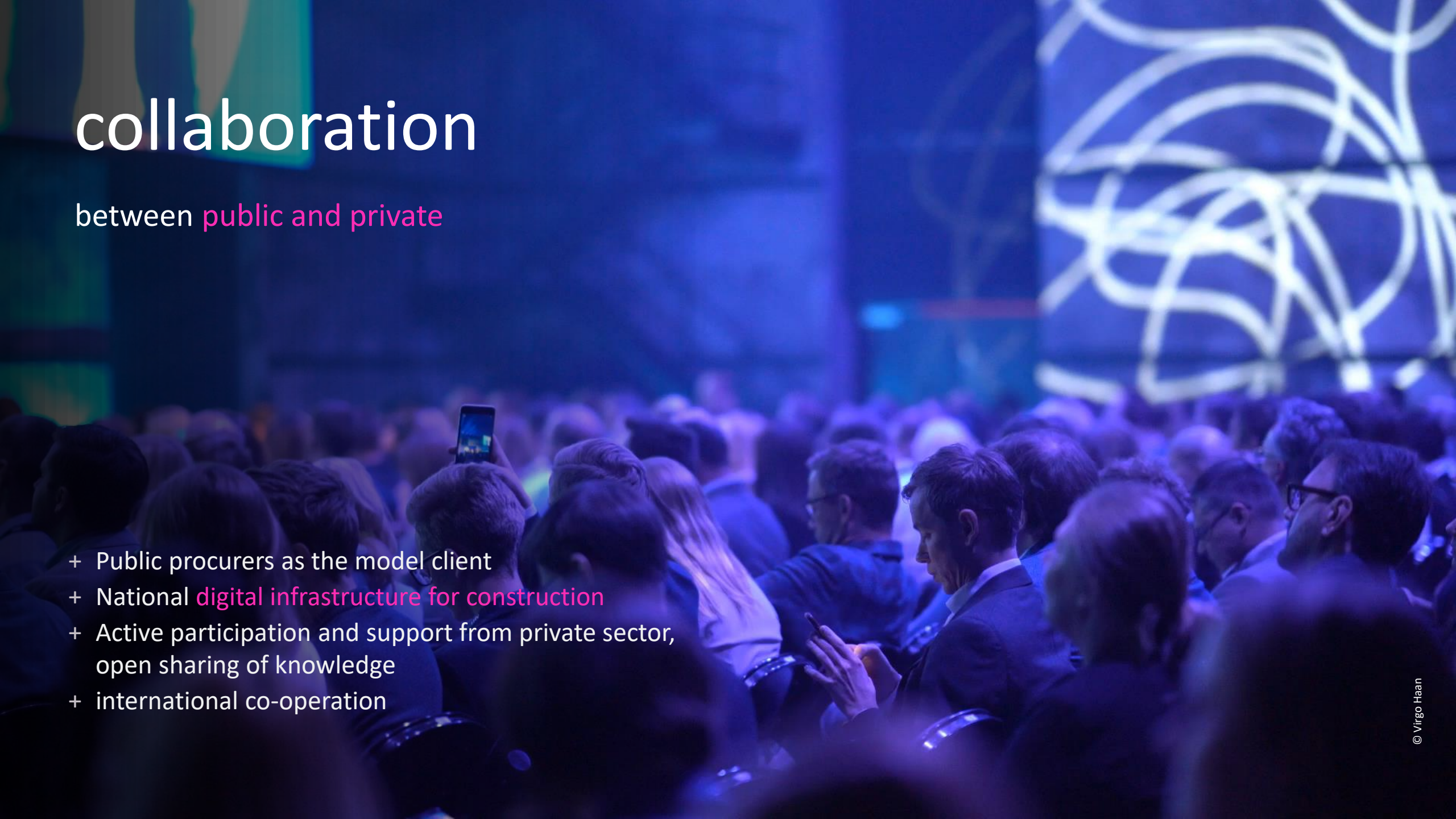


collaboration

between public and private

+ Public procurers as the model client
+ National digital infrastructure for construction
+ Active participation and support from private sector, open sharing of knowledge
+ international co-operation



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agility

start-up mentality
in government

+ over 600 startups in Estonia
+ 4 unicorns - #1 in start-up friendliness
+ deliver incrementally
+ fail fast and improve
+ build to scale-up

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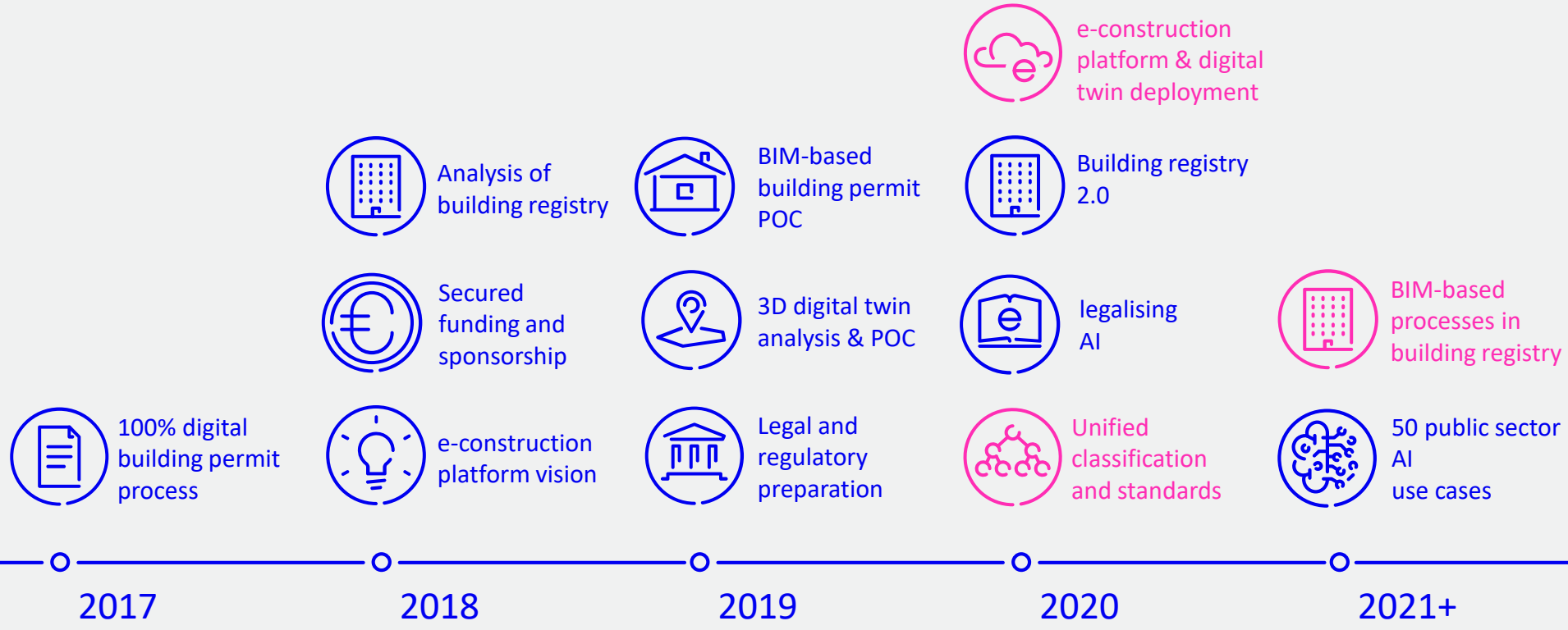
e-construction roadmap



digital leadership

The strongest leadership brings enlightenment.

+ Technology or money is not the solution

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join 33,000+ e-residents

Thank you!

+ Collaboration and transparency is key
+ Public infrastructure for connecting data and services
+ Use International open standards
+ Be bold and agile

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