New Cooperation Models in BIM Contexts

by

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BIM in an Architectural Context

Architectural firm: value creation tailored to the customer

Global integration of costs, environment, esthetic, coherence, local integration

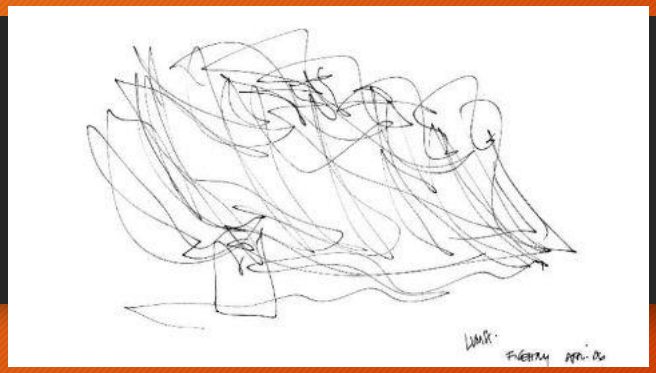
$$ + One deep conversation and then a visualization process starts

Client:

Bernard Arnault, Fondation Louis Vuitton

Architect: Frank Ghery

One idea



Client:

Bernard Arnault, Fondation Louis Vuitton

Architect: Frank Ghery

One concept

Client:

Bernard Arnault, Fondation Louis Vuitton

Architect: Frank Ghery

1 000 hand made mock-ups

Client:

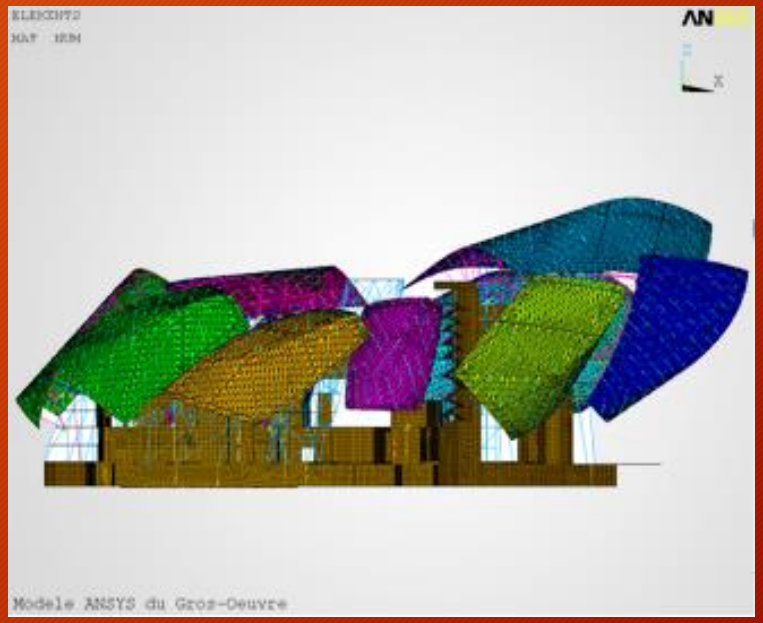
Bernard Arnault, Fondation Louis Vuitton

Architect: Frank Gehry

One digital transfert

FINAL HAND MADE MOCK-UP

VIRTUAL MOCK-UP



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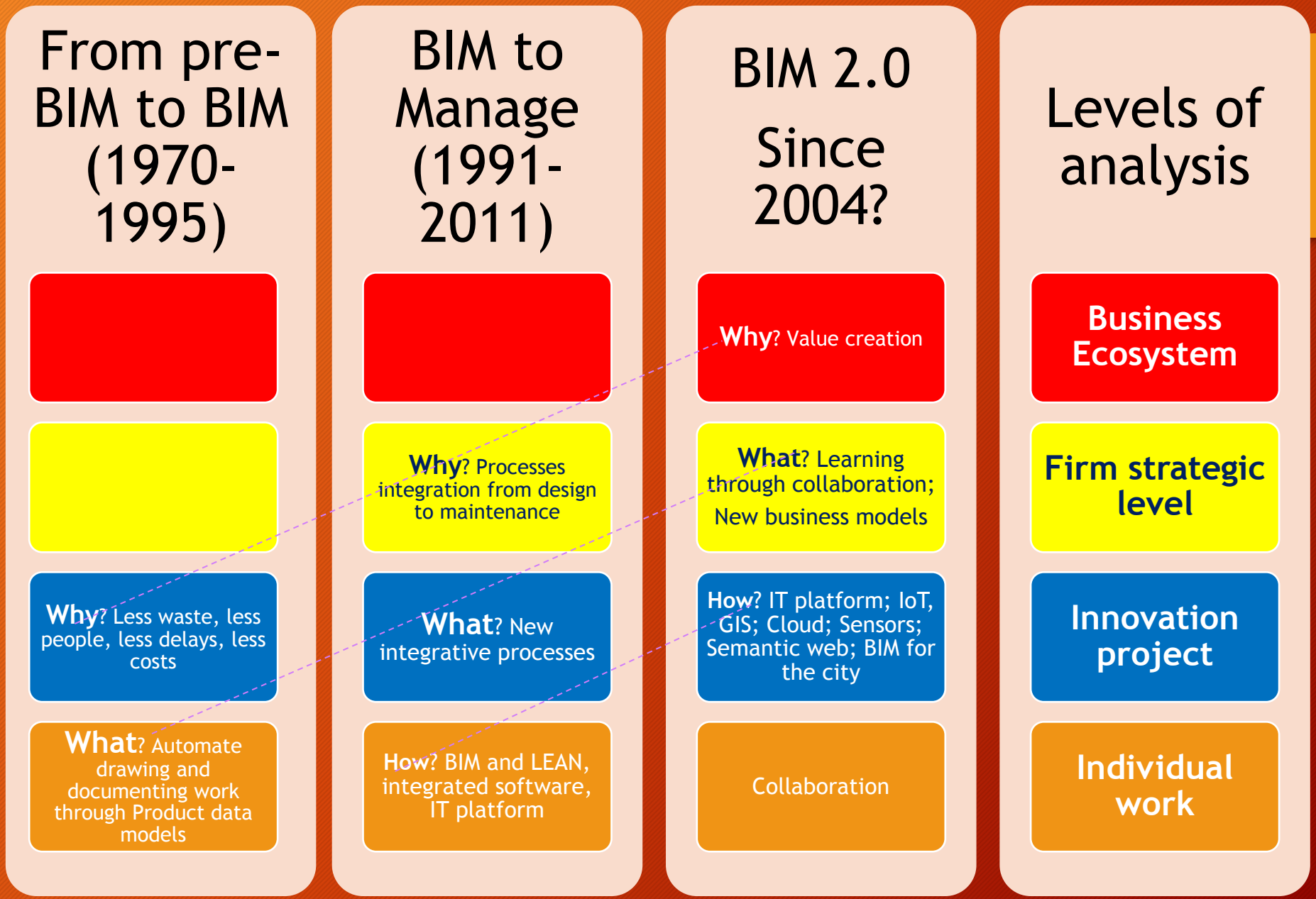
What does BIM really mean for the whole design – construction – maintenance – recycle process?

2018-02-13

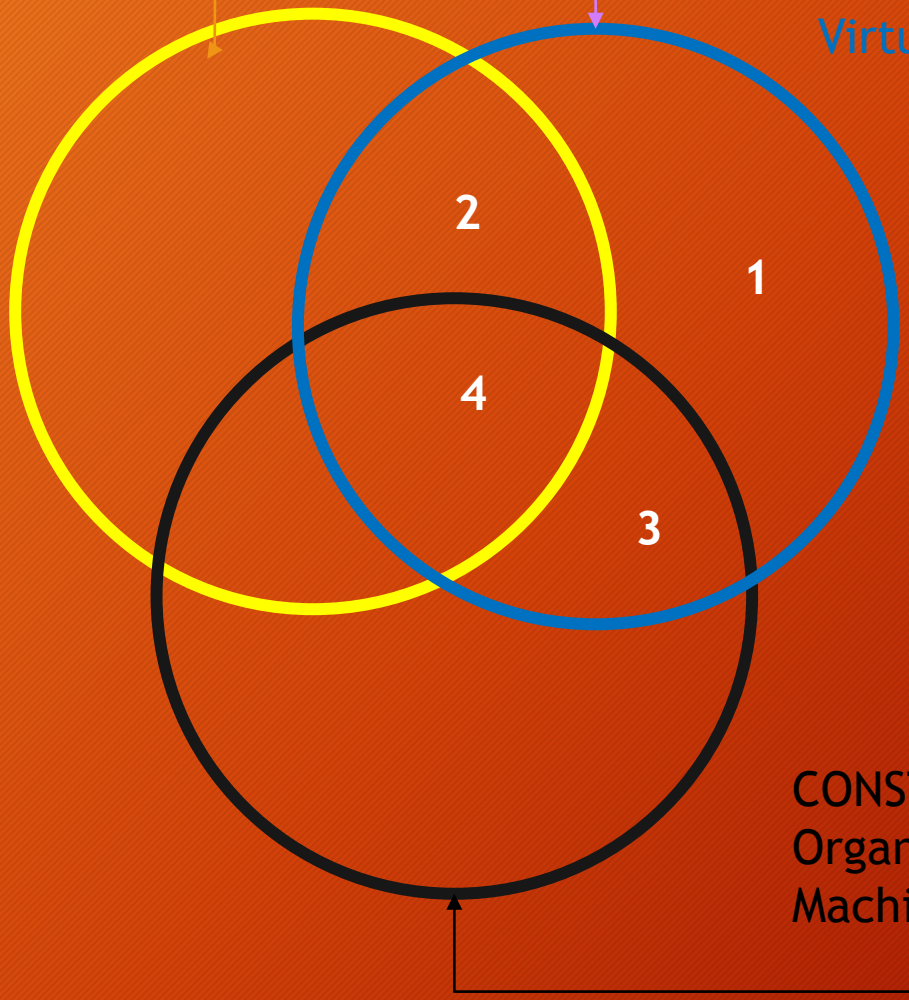

From pre-BIM to BIM (1970-1995)
Why? Less waste, less people, less delays, less costs
What? Automate drawing and documenting work through Product data models
BIM to Manage (1991-2011)
Why? Processes integration from design to maintenance
What? New integrative processes
How? BIM and LEAN, integrated software, IT platform
BIM 2.0 Since 2004?
Why? Value creation
What? Learning through collaboration; New business models
How? IT platform; IoT, GIS; Cloud; Sensors; Semantic web; BIM for the city
Collaboration
Levels of analysis
Business Ecosystem
Firm strategic level
Innovation project
Individual work

WHERE IS BIM? In Finland? In Québec?

In the hand made digitized mock-up?
In the IT streamlined construction process?
In the software industry and predefined virtual objects?
Inside new end-users design practices?
In the AEC business ecosystem?

DESIGN DOMAIN
Ideas, Concepts,
Mock-ups

VIRTUAL DOMAIN
Virtual mock-ups,
Virtual Objects



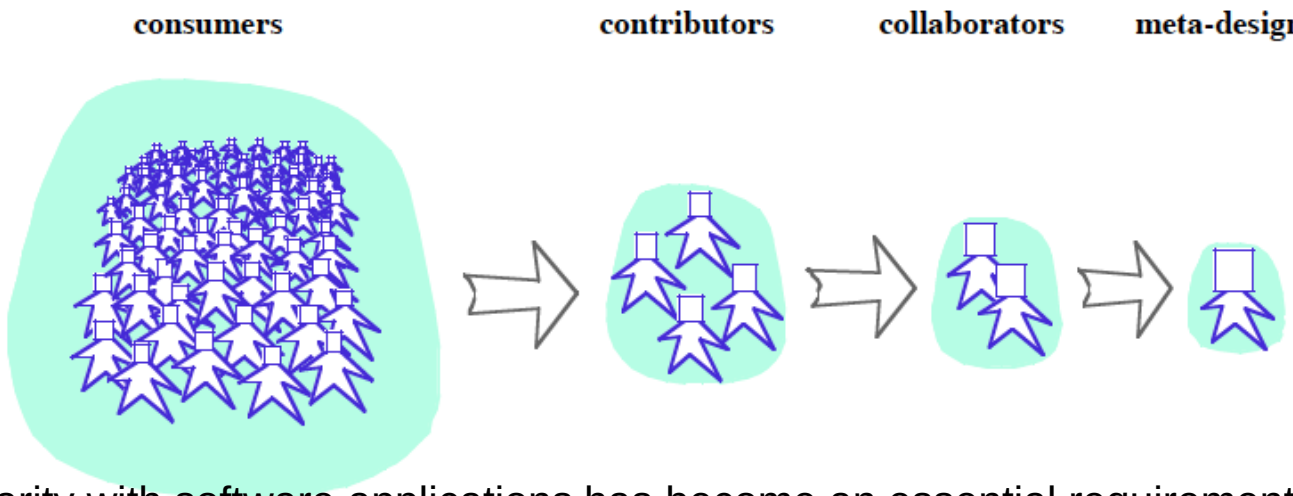
CONSTRUCTION DOMAIN
Organizations, Guilds, Skills,
Machines…

Contributor: contributors that have created a number of success models (Wikipedia) by breaking down the boundaries between producers and consumers

Collaborator: an emphasis on collaboration and co-creation facilitated by putting the tools rather than the object of design in the hands of users.

Meta-designer: design for designers

Figure 1. Different Levels of Participation and Engagement



Familiarity with software applications has become an essential requirement for professionals in a variety of complex domains: **architects, engineers,** etc.

	Consumers		Contributors		Collaborators		Meta-designers	
Architects					F02 F16		F20	
Engineers				Q07 Q12	F04			
Contractors			F08 F06 F10 F03 F07 F11	Q01 Q04 Q05 Q09 Q10	F09	Q03		
Owners				Q06 Q08	F15			
National Innovation System's Managers			F01 F13 F18 F12		F14			
Academicians				Q02	F19	Q10	F05	

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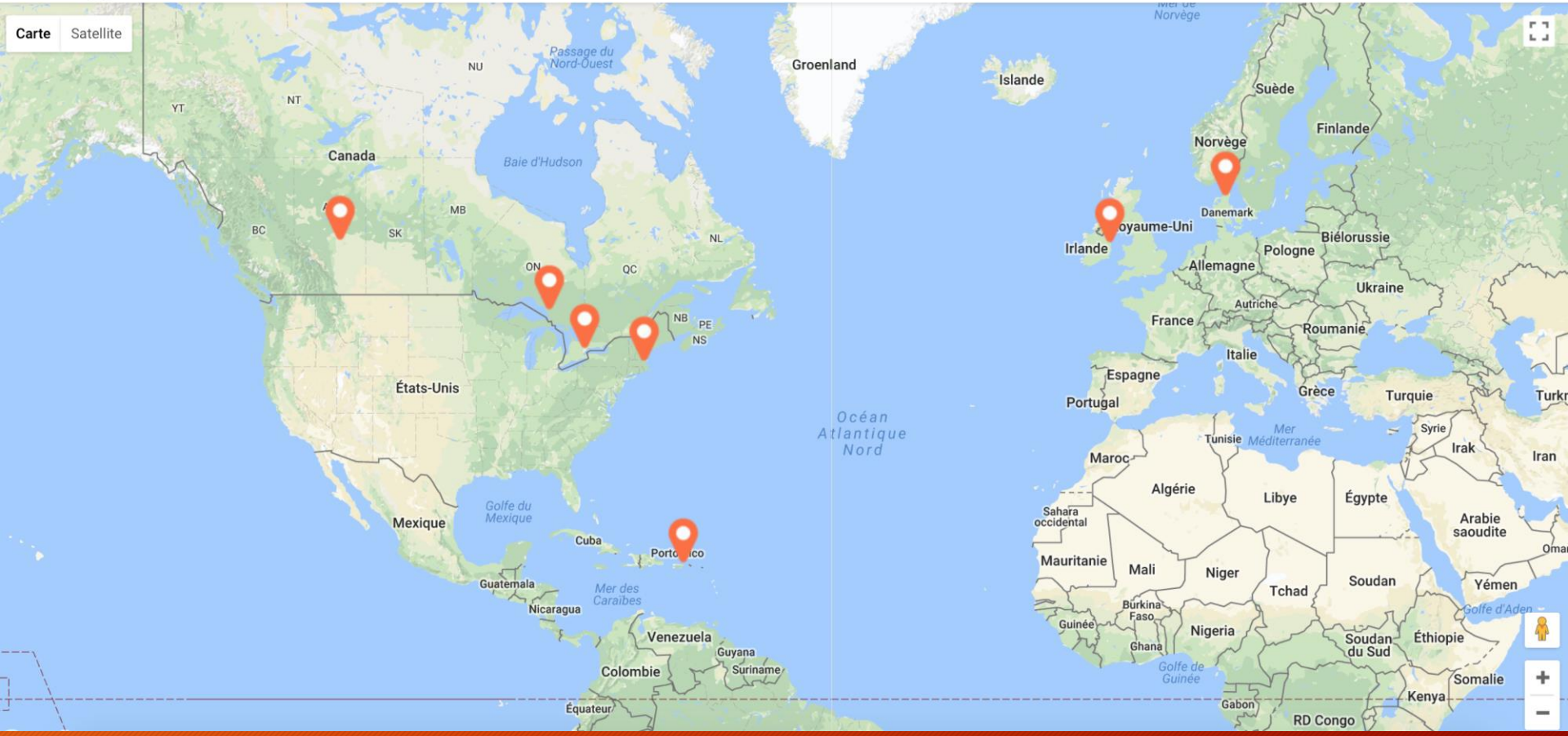

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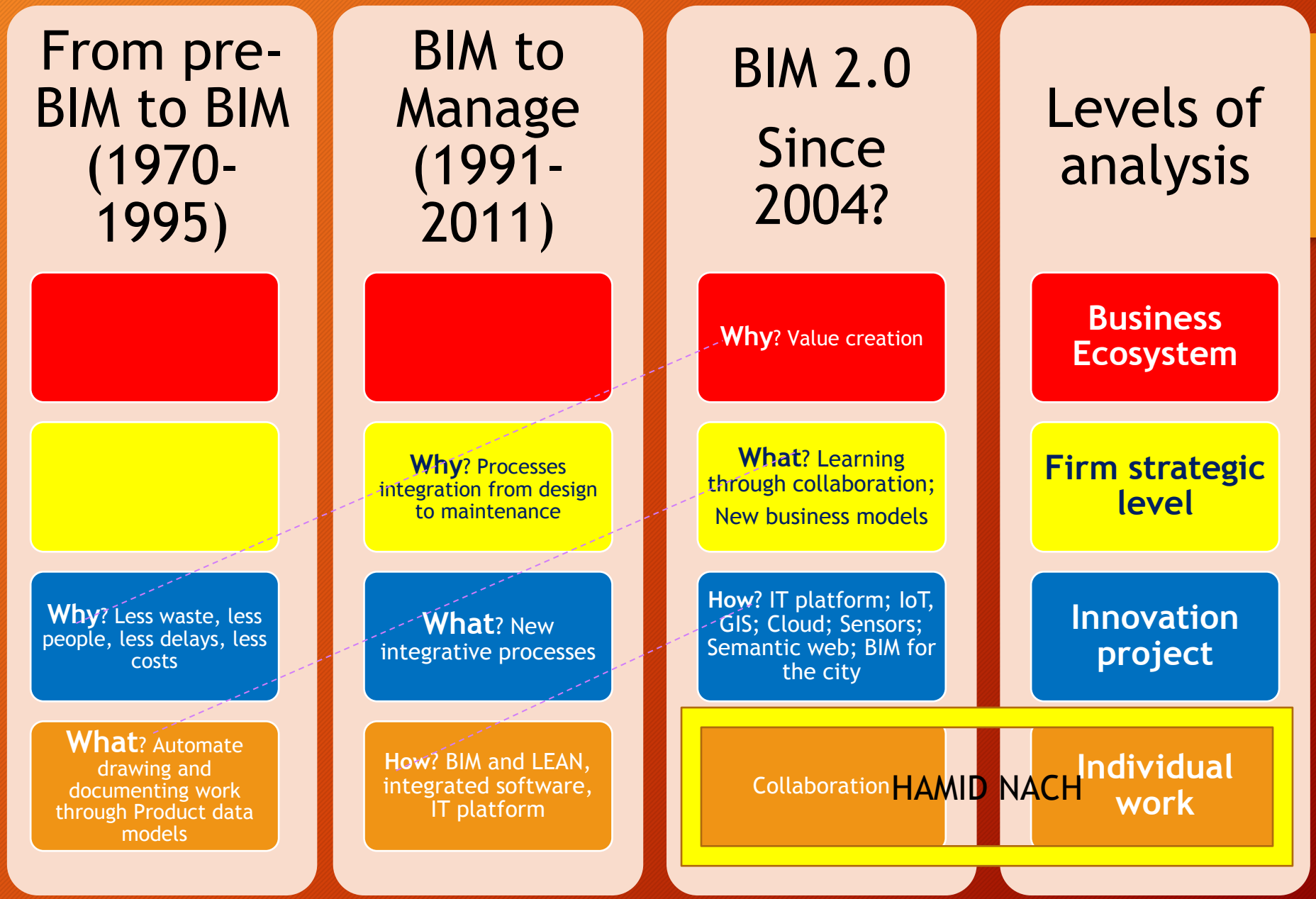
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HAMID NACH

THE END

“We (architects) are all hackers…We’ve always been a profession of hackers.
Every building is a one-off made up of countless elegant hacks, each bringing disparate materials and systems together into a cohesive whole.”

"But when it comes to the software that designers have come to rely on, ***most of us have been content with enthusiastic consumerism, eagerly awaiting the next releases from software developers*** *like Autodesk, McNeel (Rhino) and Bentley (MicroStation)".*