VDC Project Implementation Deep Dive:

Process modeling for knowledge work VDC application objectives, production metrics, controllable factors

Martin Fischer

Learning Objectives:

1. You have understood how to model production processes for knowledge work.

You are comfortable in creating logical and useful chains of metrics from VDC application objectives to production metrics to controllable factors.

In summary, you have understood how to think of the part of your project you can influence as a production system.

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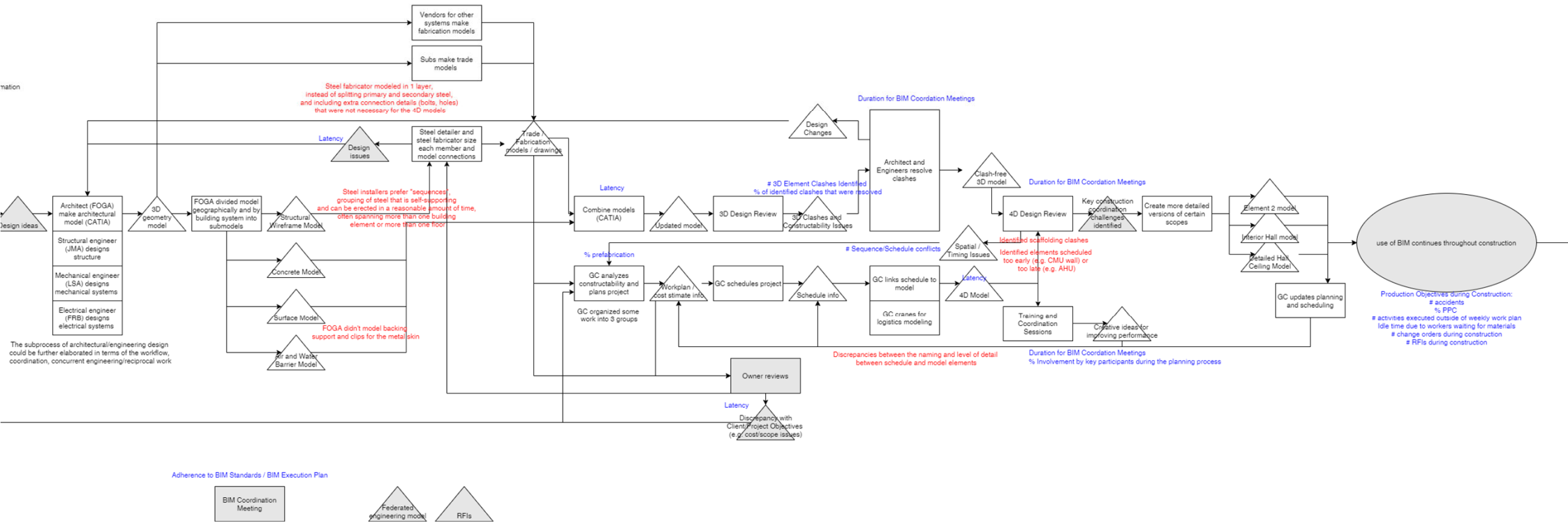
Process to create a buildable design and construction schedule or the Walt Disney Concert Hall in Los Angeles



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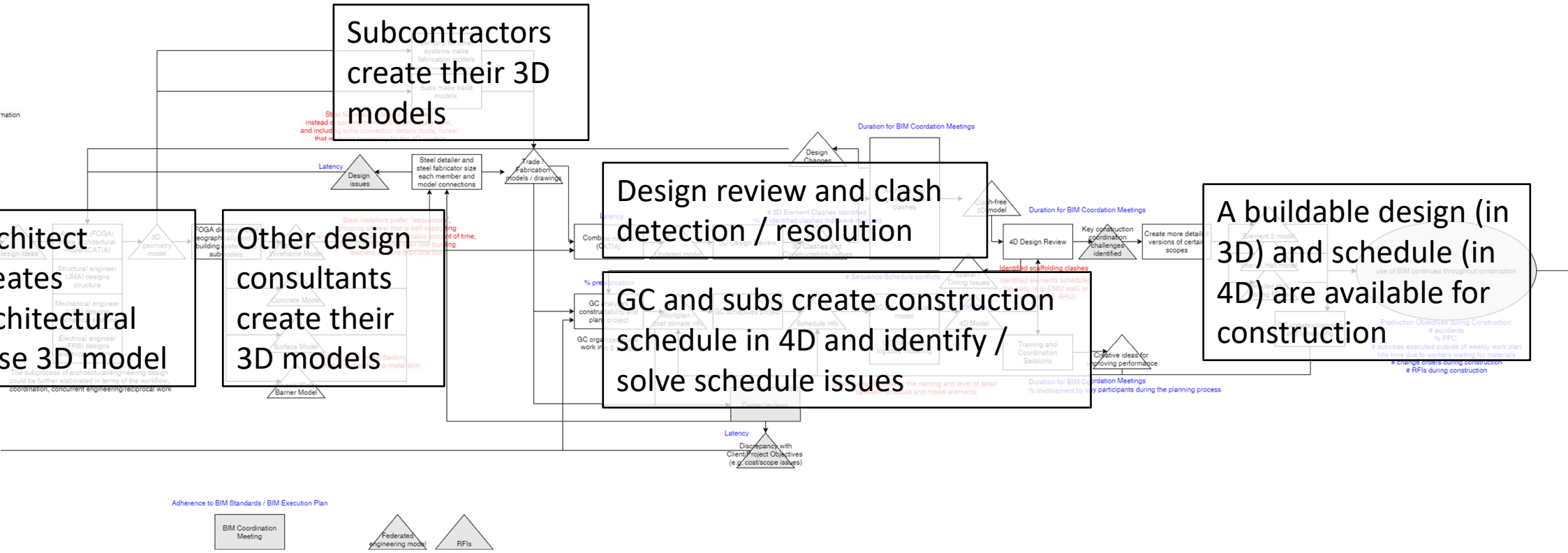
Process to create a buildable design and construction schedule or the Walt Disney Concert Hall in Los Angeles



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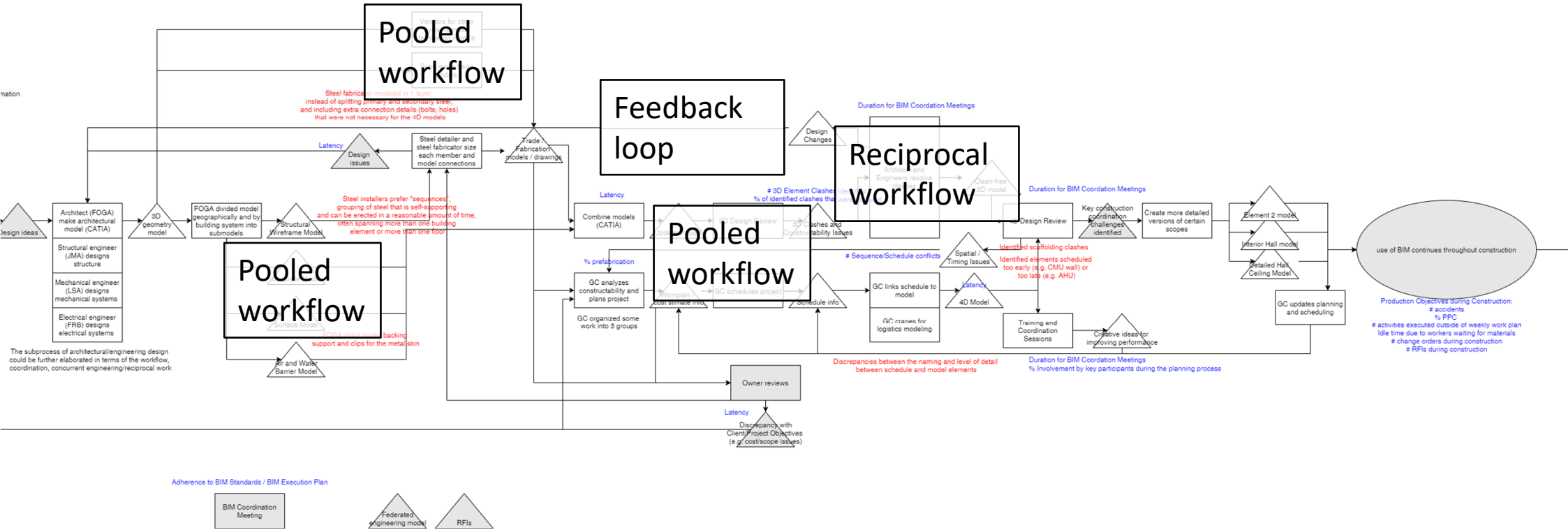
Process to create a buildable design and construction schedule or the Walt Disney Concert Hall in Los Angeles



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Many process models look like this

- ♡ Easy to follow
- ♡ Tasks and their sequence are clear

- ⊘ Unclear what work is produced as output and what's needed as input

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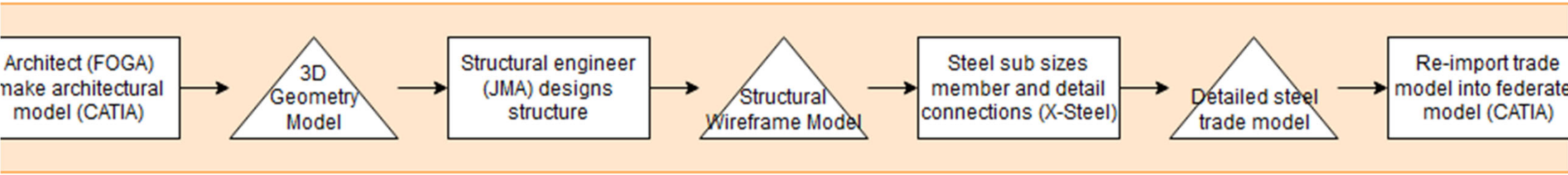
ing WIP (Work in Process) clarifies what is produced (what's neec

- Output produced as input for the next task is clear



- How much of the output is produced / needed as input?

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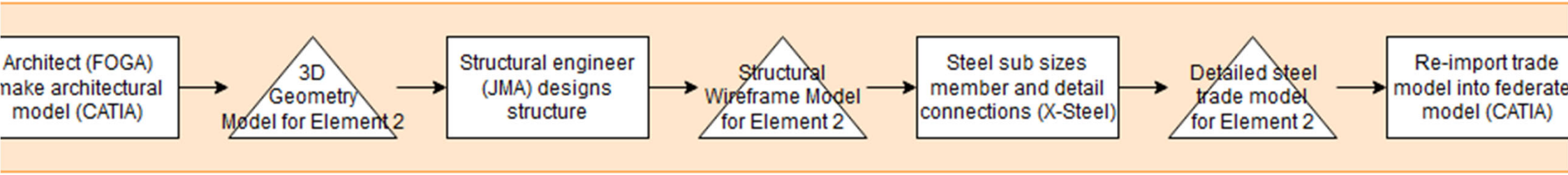
The process becomes clear when you specify the batch size of the output produced

- Amount of work produced (batch size) is clear



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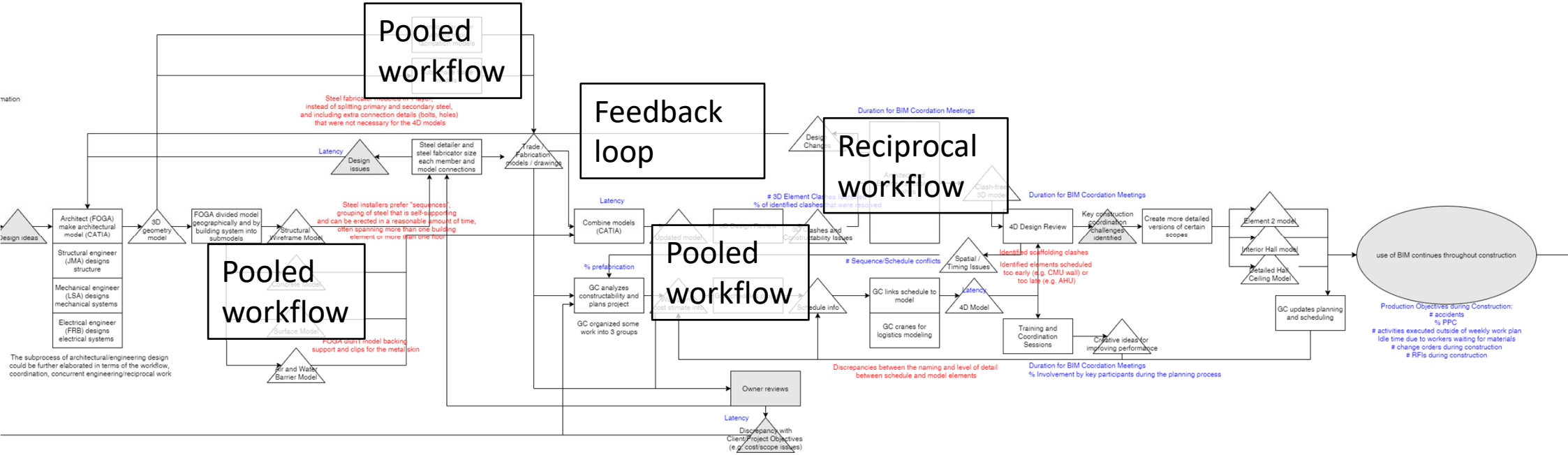
/DC project implementation (application) objective and controllable factors



pplication objective
a buildable design and construction schedule in the next five months

llable factors		
	ICE	PPM
nitecture model in CATIA	Bi-weekly design review sessions	Parallel (pooled) development of 3D mo consultants and subcontractors
del combining 3D architecture model nstruction schedule in Primavera	Bi-weekly construction schedule review sessions	Parallel (pooled) clash resolution in 3D a 4D

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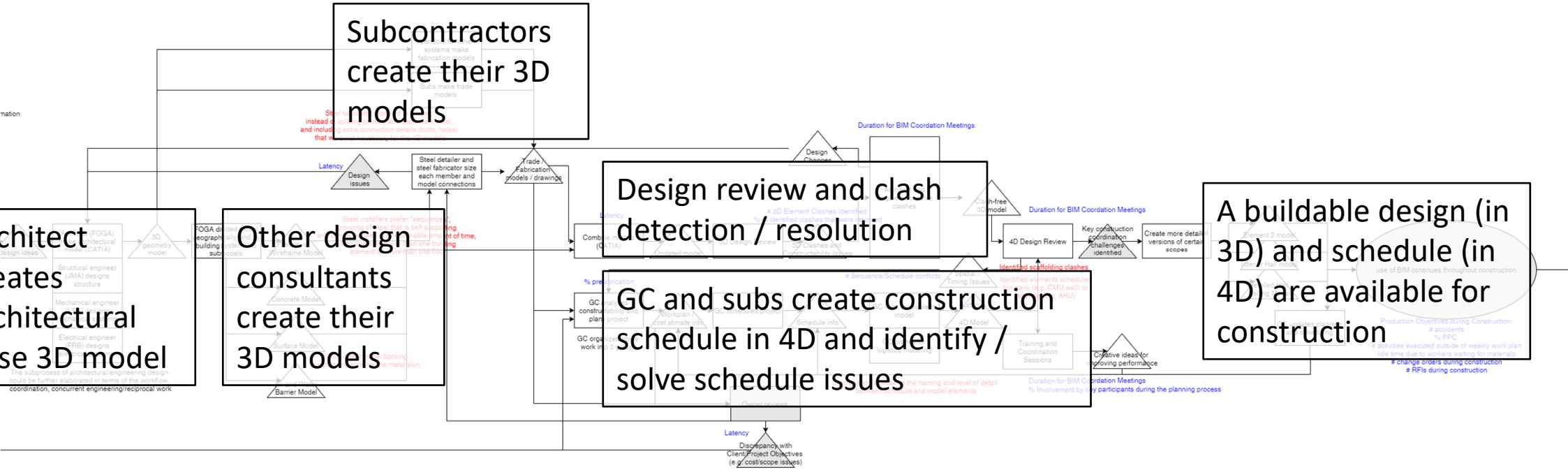
Production metrics connecting the controllable factors and VDC application objective



tion metrics and targets

	ICE	PPM
shes resolved in 2 weeks: 75% shes resolved in 4 weeks: 100%	# of design improvements generated in each ICE session > 2 per discipline	# of conflicts that have to be handled more t once < 5%
ours per week to adjust the 3D model for deling < 10	# of construction improvement ideas generated in each ICE session > 3 per participant	# RFIs to clarify the design < 2 per week
resolved clashes at construction start = 0	# of ICE sessions to address an idea < 3	# of construction sequence changes < 1 per

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Production metrics connecting the controllable factors and VDC application objective

This is your production system

tion metrics and ta ts	ICE	PPM
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