

Integraal is meer dan kiezen

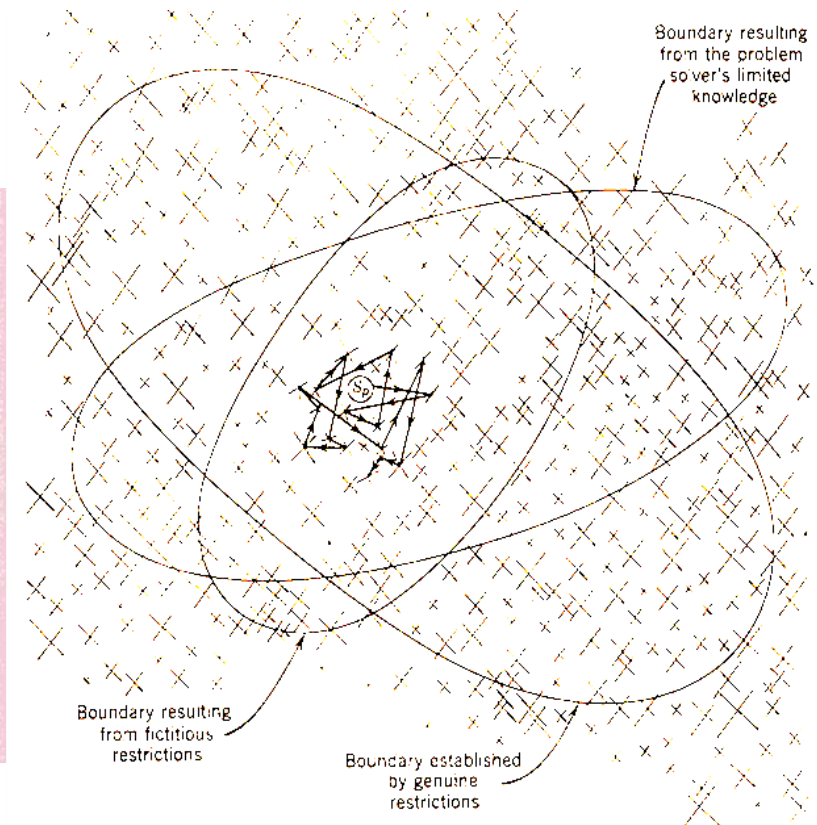
Dr.ir. Perica Savanović

onderwerpen

1. Begripsvorming,
2. Integraal ontwikkelen en ontwerpen,
3. Focus op morfologische overzichten,
4. Geïntegreerd vs. integraal,
5. Paradigmaverandering.

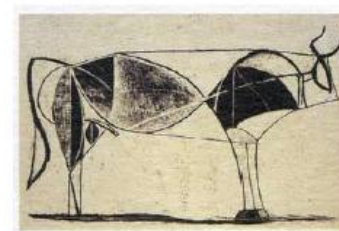
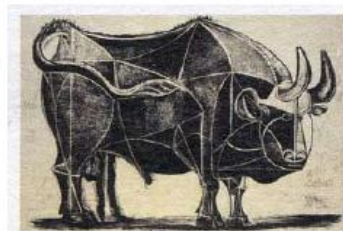
begripsvorming

Groepsbeeld en -kennis



integraal

Interpretatie en presentatie



bull

910 kg of
CO₂/year

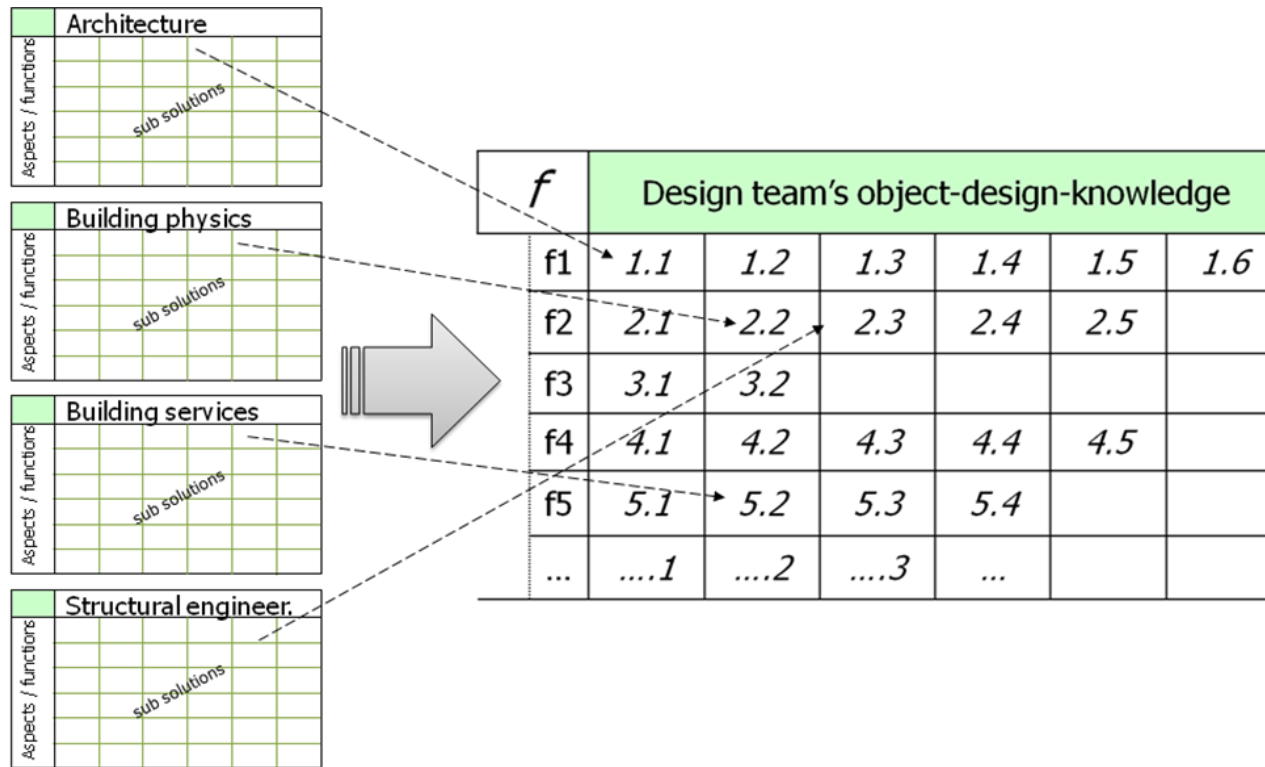
integraal

Creatie en presentatie (expliciteren!)



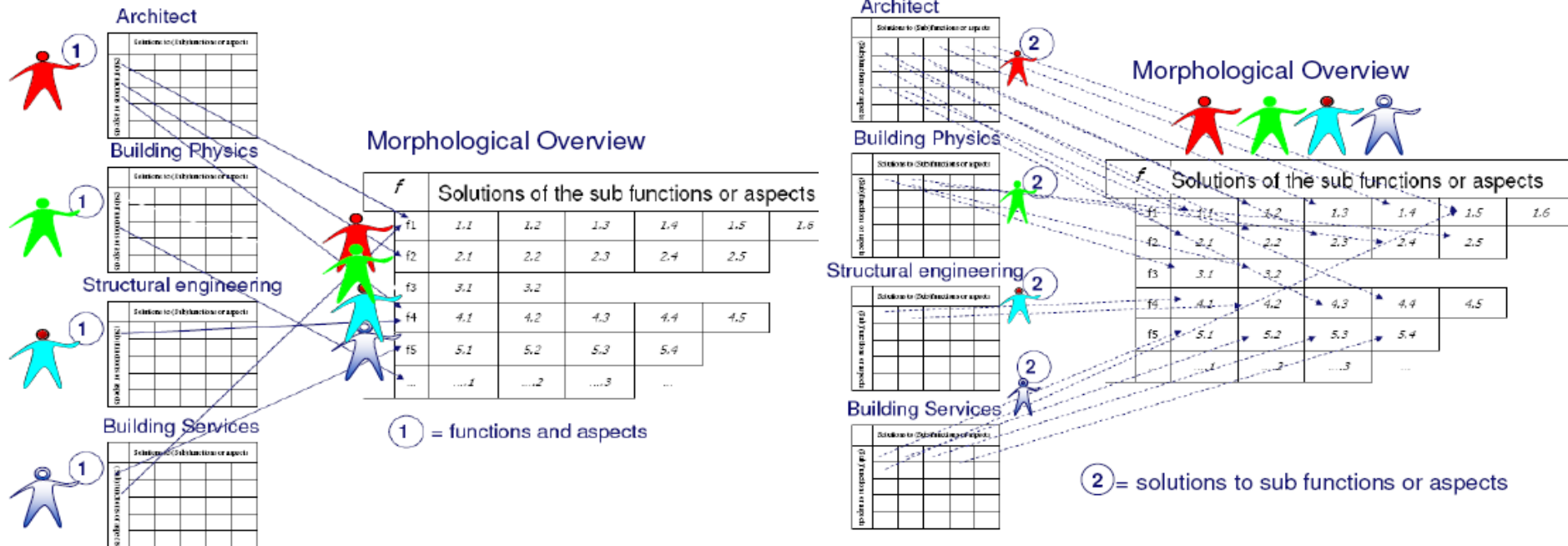
morfologische overzichten

Inbreng van expliciete kennis



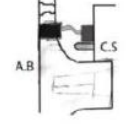
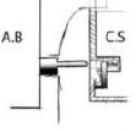
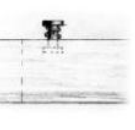
morfologische overzichten

Van discipline gebaseerde morfologische kaarten naar team gebaseerde morfologische overzicht



morfologische overzichten

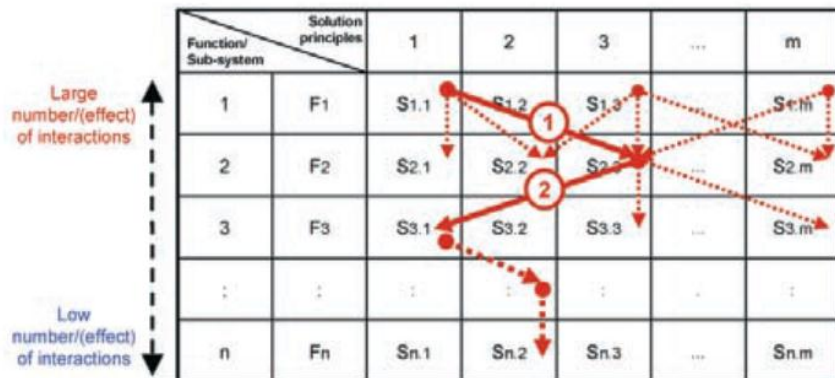
Voorbeeld auto-industrie

	Sub-Concept 1	Sub-Concept 2	Sub-Concept 3	Sub-Concept 4	Sub-Concept 5	Sub-Concept 6
Airbag mounting	Current solution 	The airbag is screwed from front 	The airbag is screwed from back 	Latches and springs 		
Airbag to SWM connection	Back-facing connector to SWM 	Through Clock Spring cable 	Flexible connector 	Airbag to CS steering v 		
Steering wheel securing	Screw through asymmetric column 	Touching screw 	Tight angle screw asymmetric column 	Snap le 		
Clock spring locking	Spring in centre of Clock Spring 	Pin in hole (spring loaded) 	Press pin (spring loaded) 	DAB feet unlocks Clock Spring 	Breakable sealing 	



morfologische overzichten

Voorbeeld auto-industrie



Synergy grades

- high
- ◐ medium
- no
- ⊗ conflict

1 Synergy analysis for the solution combination S1.1 U S2.3.

Criteria	Synergy grade	Description of synergy/interaction	Complementary solutions, integration proposal
Performance 1	◐ (medium)	...	S1.1 U S2.3
Performance 2	◐ (medium)	...	
Performance 3	● (high)	...	
Performance 4	...	...	
Performance 5	...	...	
Geometry	...	...	
Material	...	...	
Manufacturing	...	...	

2 Synergy analysis for the solution combination S1.1; S2.3 U S3.1.

Criteria	Synergy grade	Description of synergy/interaction	Complementary solutions, integration proposal
Performance 1	◐ (medium)	...	S1.1; S2.3 U S3.1
Performance 2	○ (no)	...	
Performance 3	● (high)	...	
Performance 4	...	...	
Performance 5	...	...	
Geometry	...	...	
Material	...	...	
Manufacturing	...	...	

Figure 7. Synthesis steps including synergy analysis [Almefelt 2005a]

morfologische overzichten

Voorbeeld auto-industrie



more finished



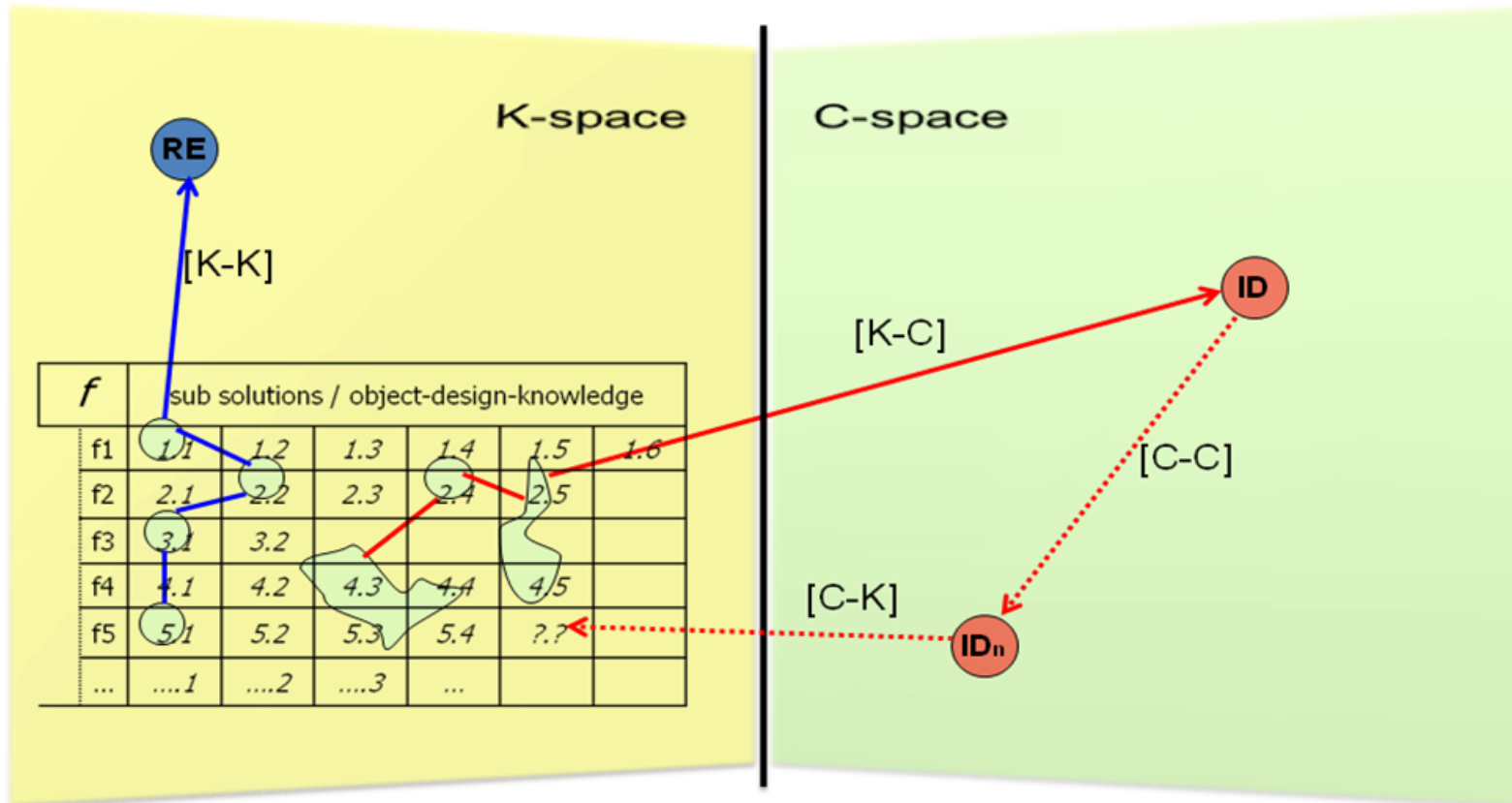
less finished

A dimension: "perceived finishedness"

Jonathan Edelman
Center for Design Research
Stanford University
February 2, 2010
Design Society SIG
Paris Mines Tech

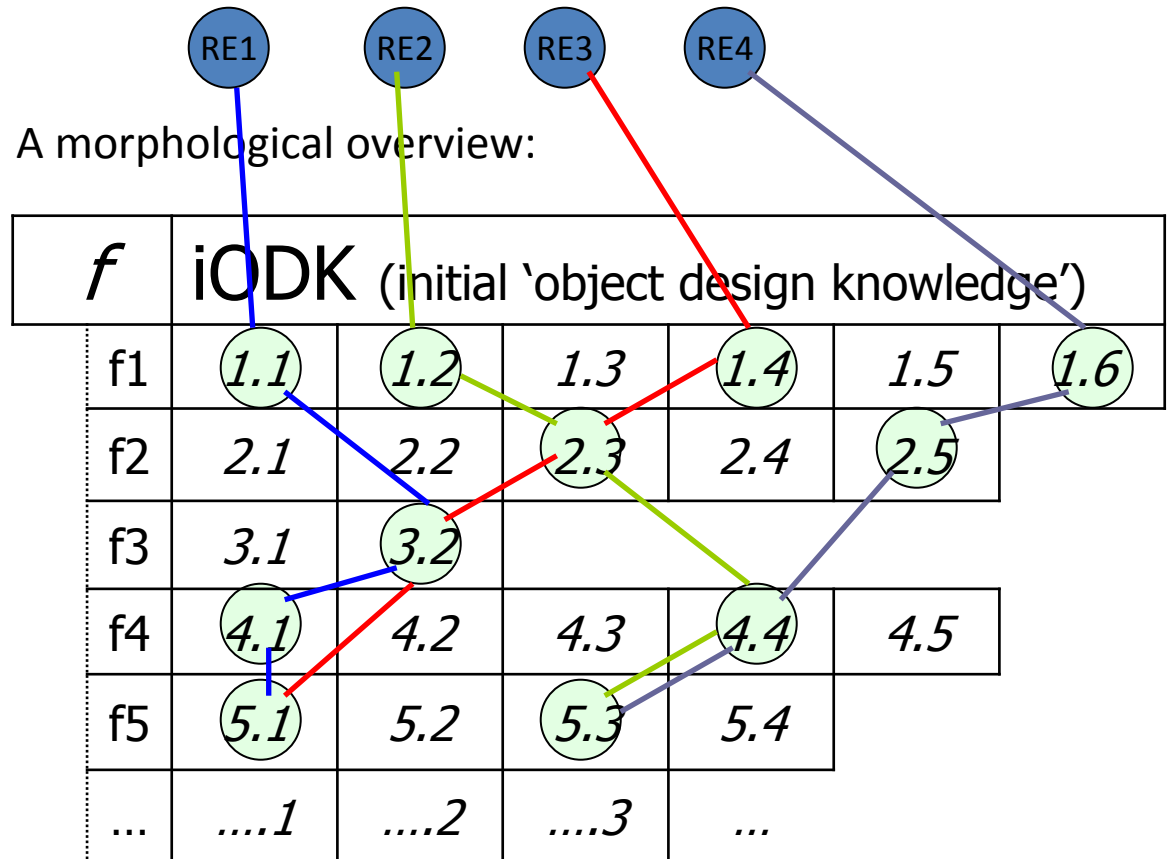
geïntegreerd vs. integraal

Kennis en concepten



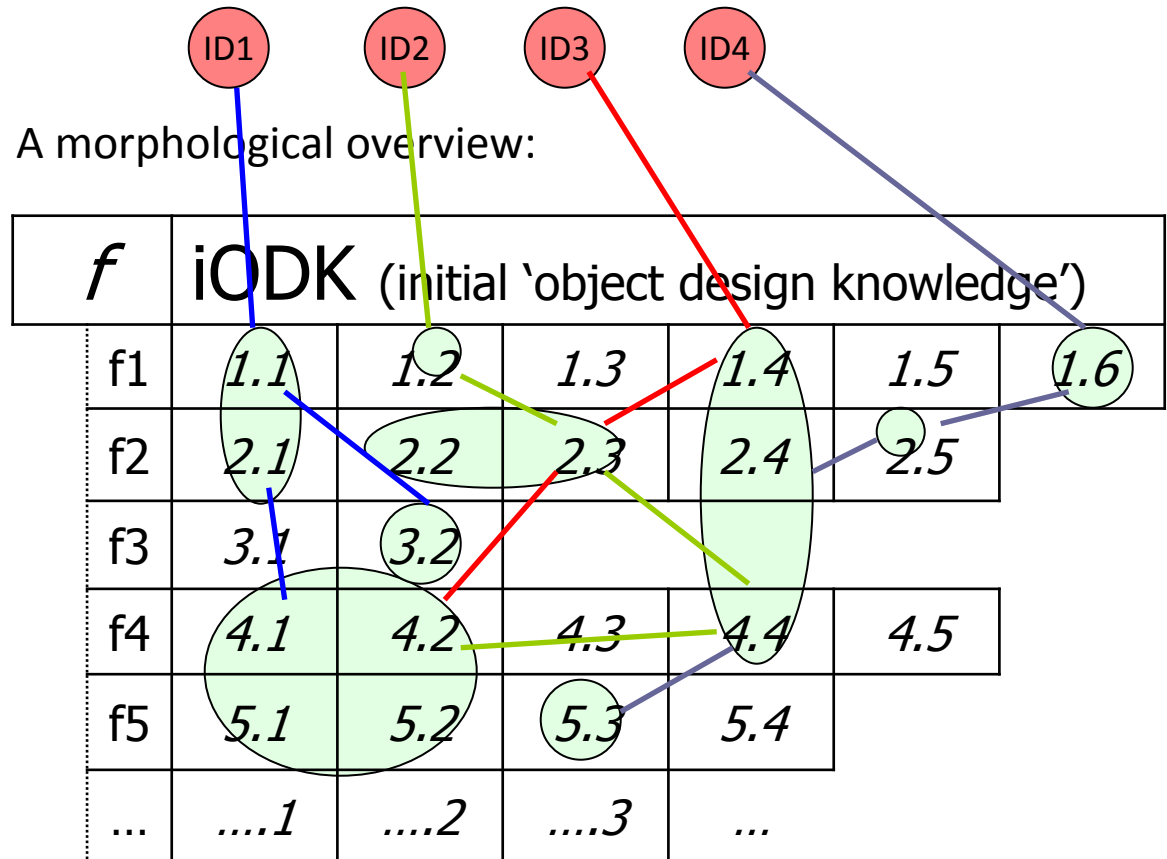
geïntegreerd vs. integraal

objectkennisintegratie



geïntegreerd vs. integraal

objectkennistransformatie



paradigma verandering!?

Probleemoplossend – reflectief

