

- **STABU Foundation**
- **The “I” in BIM**

ICIS DA 2018
rbaayen@stabu.nl

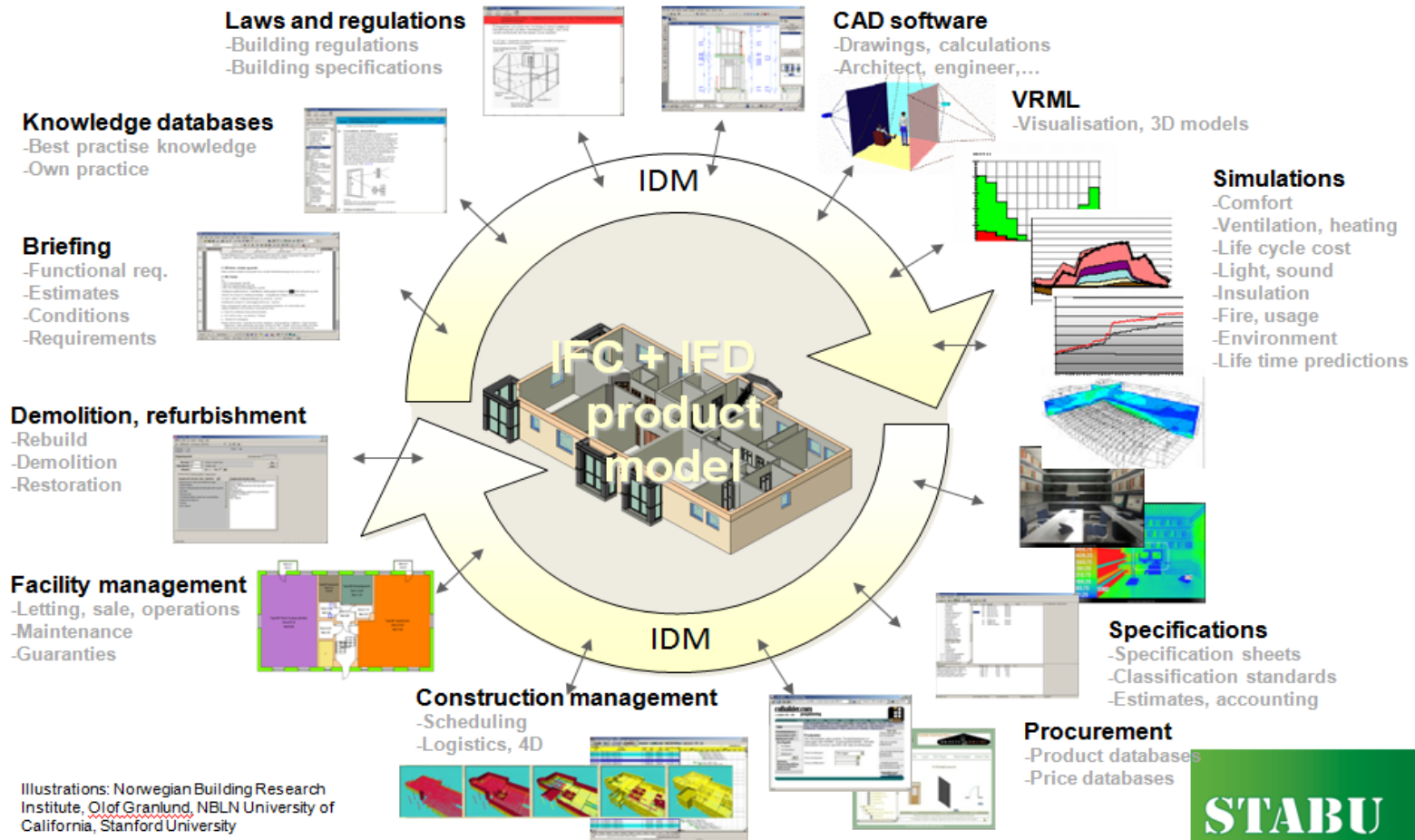
STABU Bouwbreed

En route to information management

what is
BIM



THE HOLY GRAIL

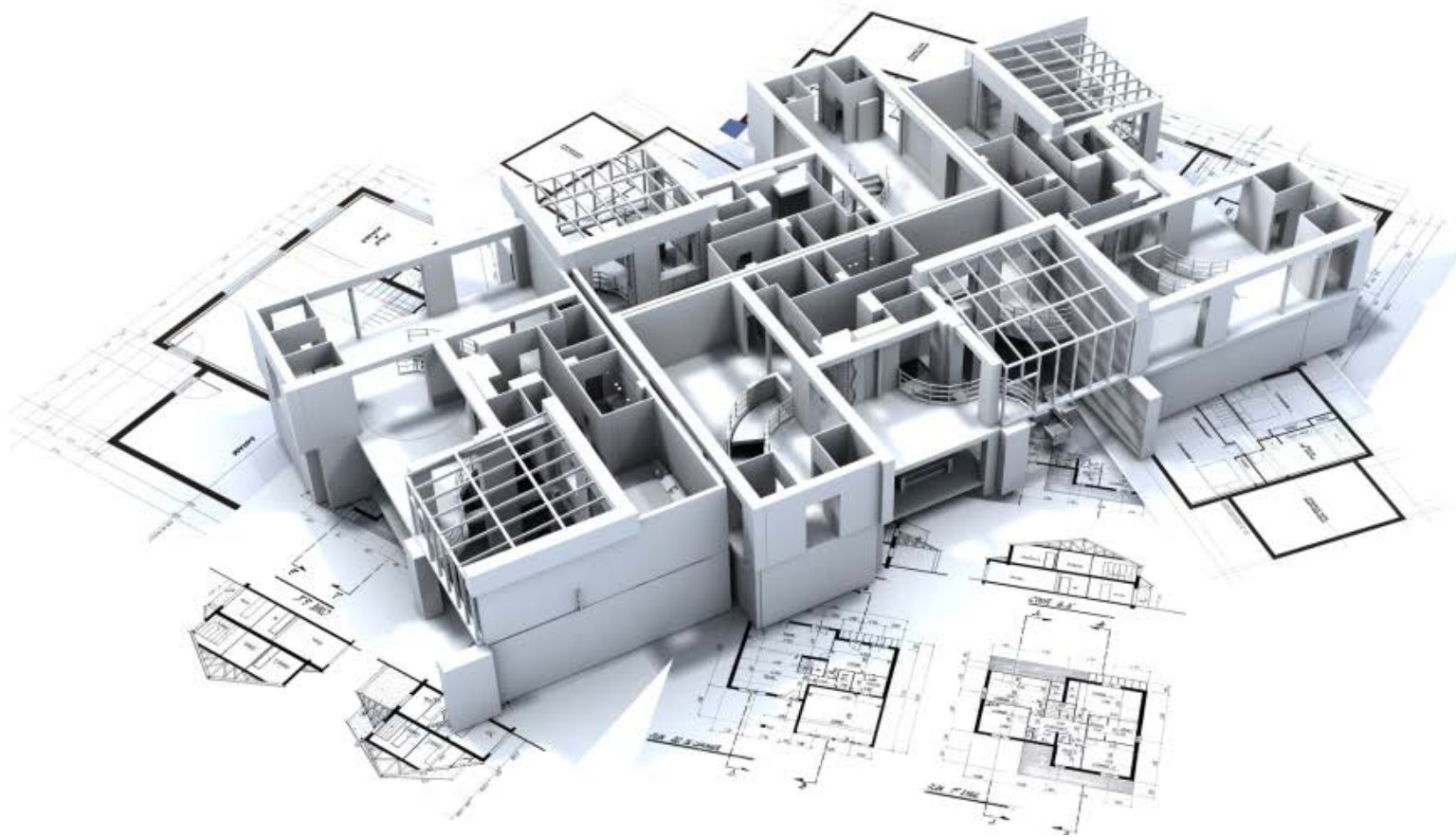


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Components

GEOMETRIC MODEL



Bron: <http://www.meridiantitle.com/>

Components of BIM 1/3
Geometric model to shape the virtual building.

DATA MODEL



Components of BIM 2/3
Datamodel to look at data from various points of view.

Datamodel

Content = Key



Onderdelen van BIM 2/3

Datamodel om vanuit verschillende kanten naar de informatie te kunnen kijken.

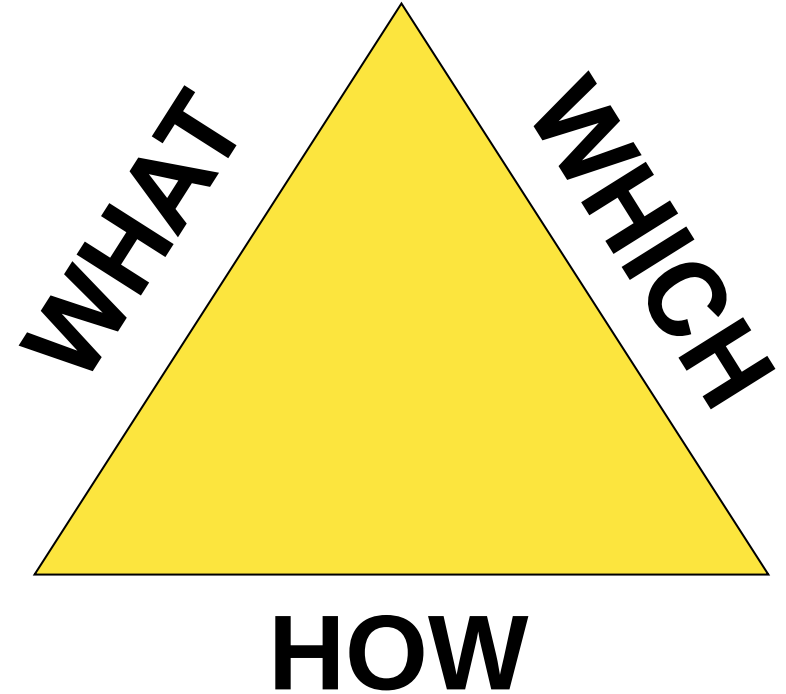
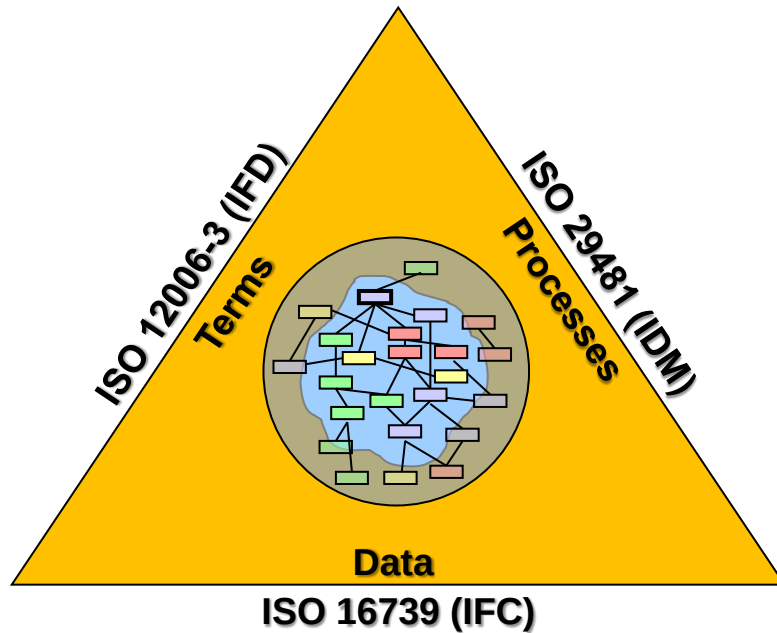
PROCESS MODEL



Components of BIM 3/3
Processmodel to manage information through the lifecycle.

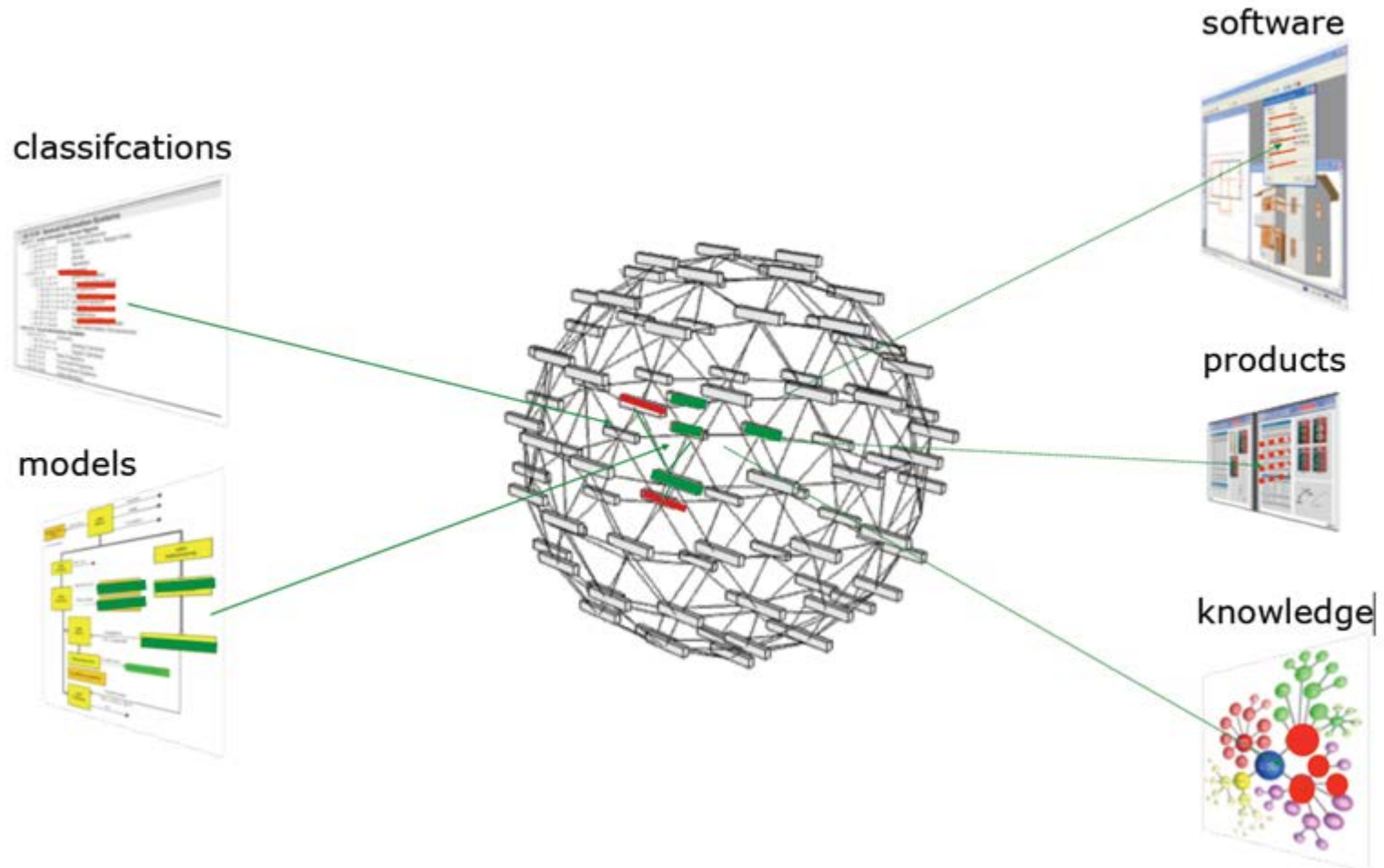
Necessities

STANDARDS



Necessities for BIM
Standards make exchange possible.

CONNECTIONS



Necessities for BIM
Connection to realize exchange (CB-NL/bSDD)

CONTENT



Necessities for BIM
Content and knowledge to give meaning

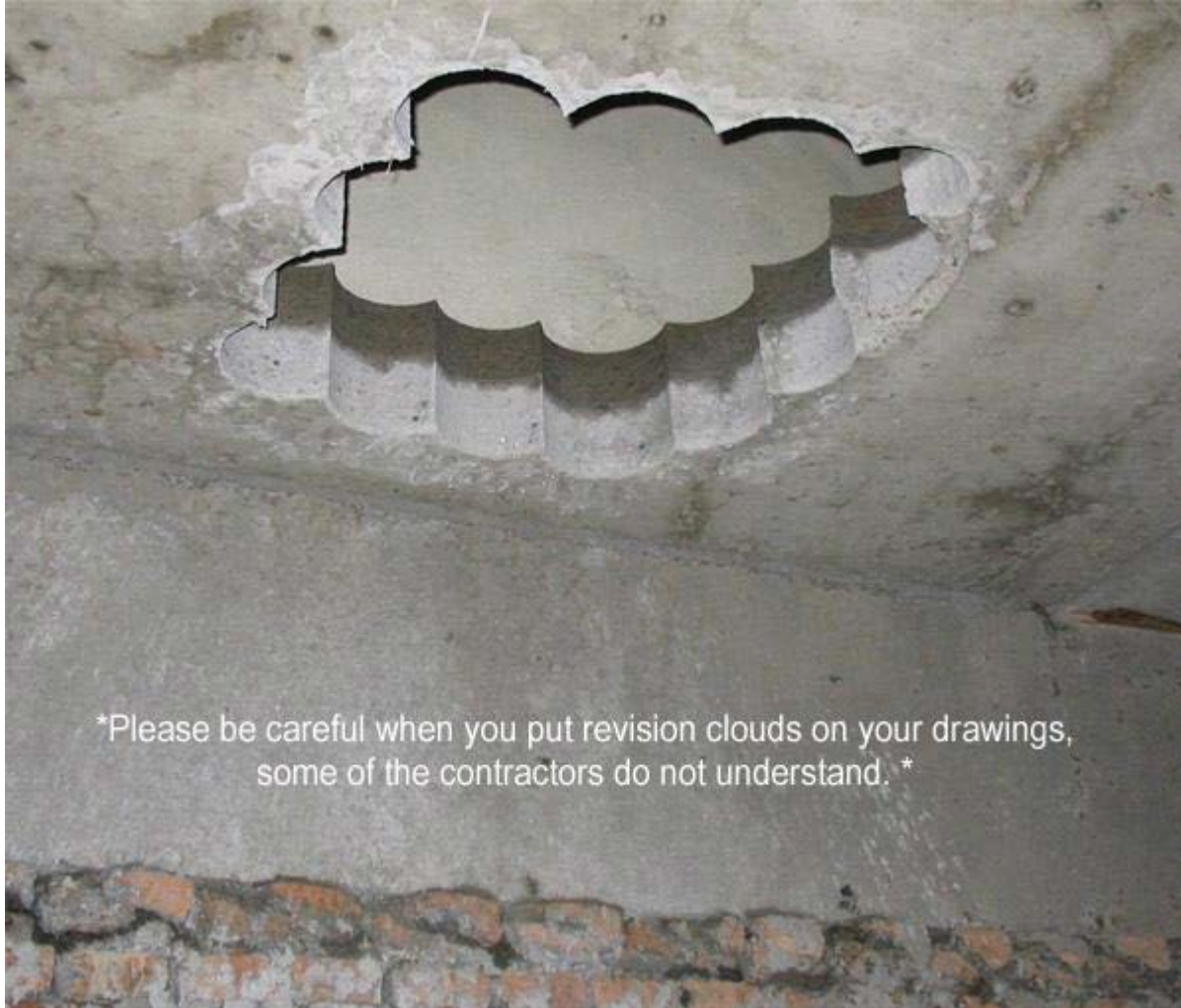
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TOOLS



Necessities for BIM
Tools to work with.



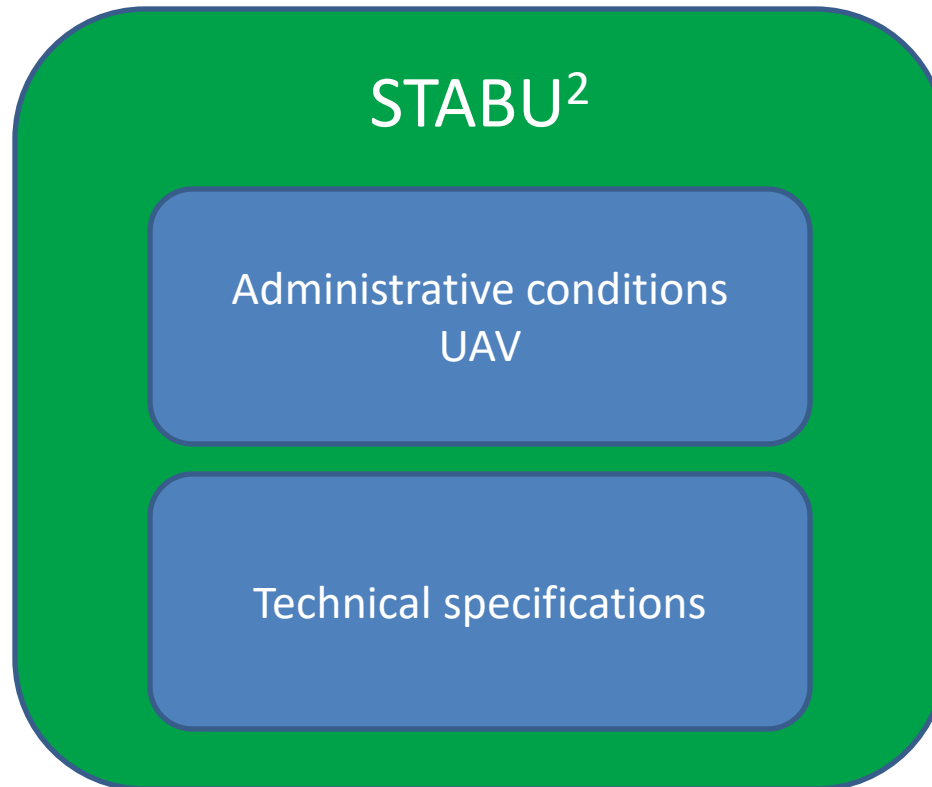


*Please be careful when you put revision clouds on your drawings,
some of the contractors do not understand. *

SPECIFYING

where do we come from?

Traditional STABU



Existing process ...

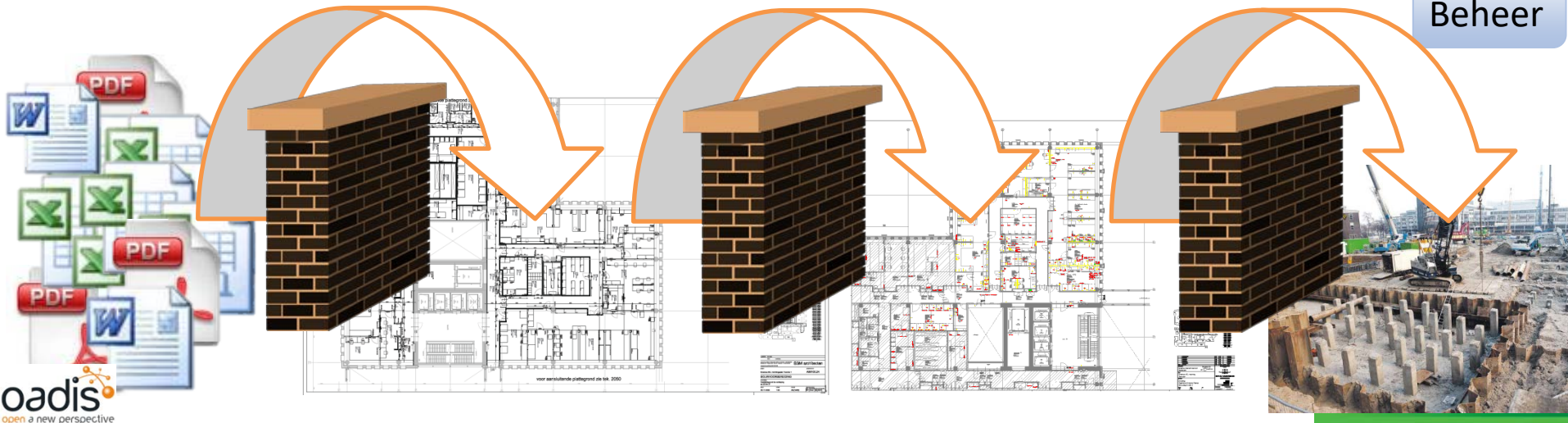
Programma van eisen (XLS)

Architect ontwerpt in 2D CAD

Engineering in 2D CAD

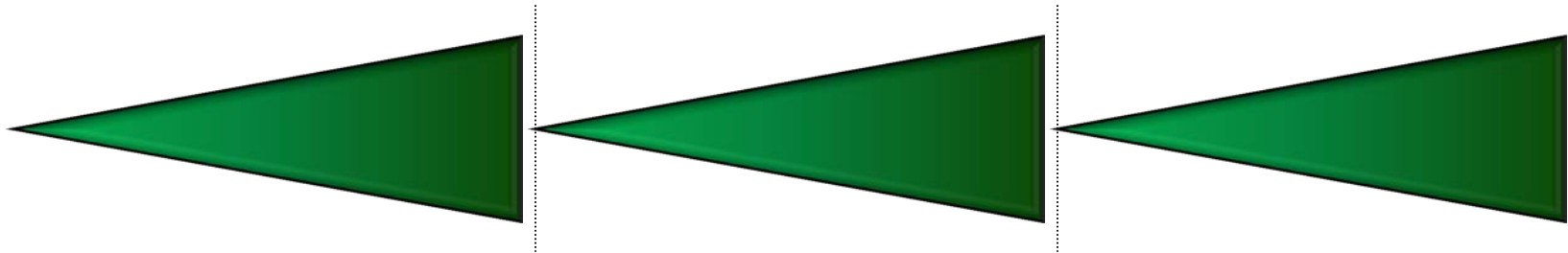
Bouwcombinatie idem

Beheer

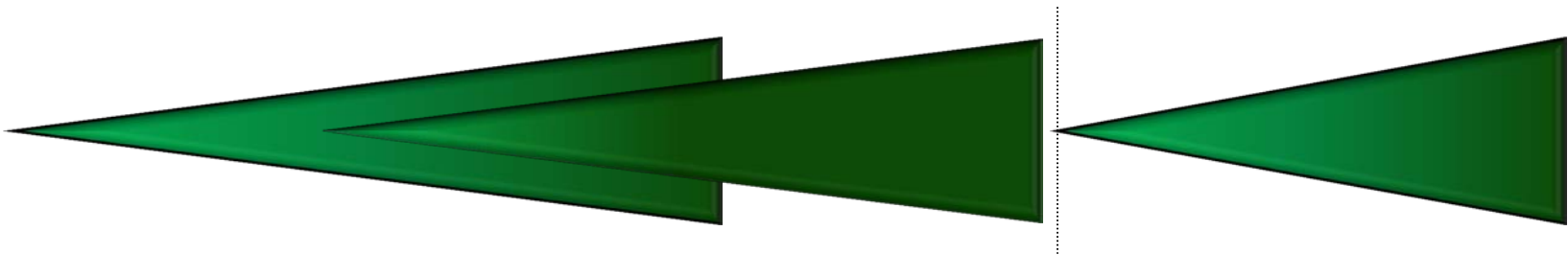


Building information

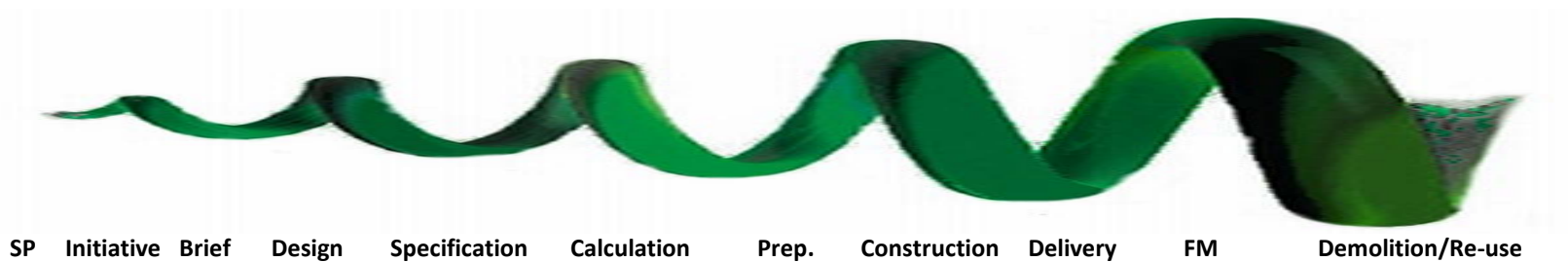
Construction process: traditional



Construction process: construction team



Construction process: integrated



The 'holy grail' of BIM

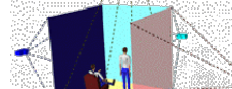
Laws and regulations

- Building regulations
- Building specifications



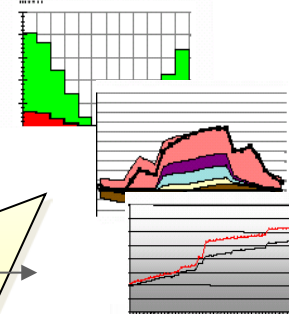
CAD software

- Drawings, calculations
- Architect, engineer,...



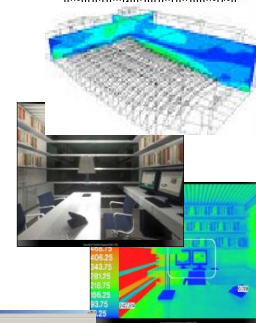
VRML

- Visualisation, 3D models



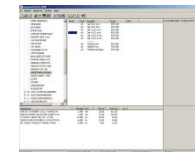
Simulations

- Comfort
- Ventilation, heating
- Life cycle cost
- Light, sound
- Insulation
- Fire, usage
- Environment
- Life time predictions



Specifications

- Specification sheets
- Classification standards
- Estimates, accounting



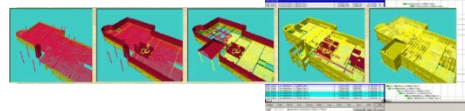
Procurement

- Product databases
- Price databases



Construction management

- Scheduling
- Logistics, 4D

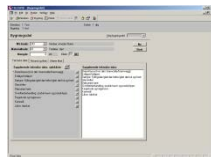


Facility management

- Letting, sale, operations
- Maintenance
- Guaranties

Demolition, refurbishment

- Rebuild
- Demolition
- Restoration



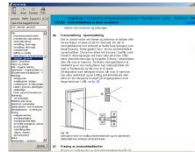
Briefing

- Functional req.
- Estimates
- Conditions
- Requirements

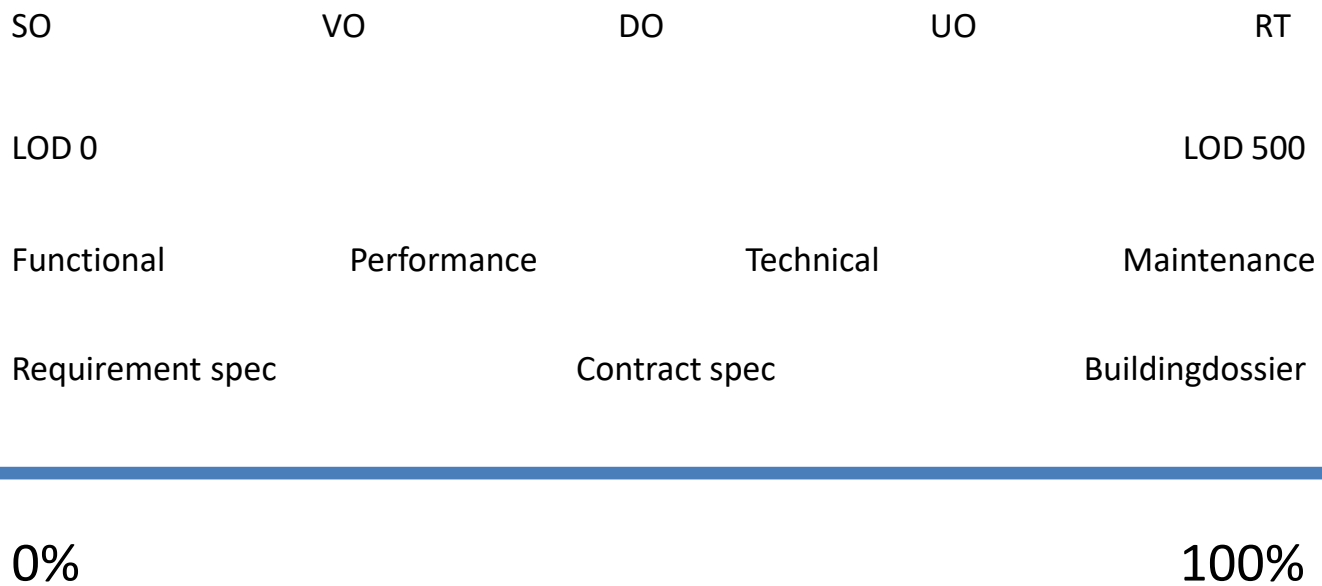


Knowledge databases

- Best practise knowledge
- Own practice



IFC + IFD
product
model



STABU construction wide

STABU Construction wide

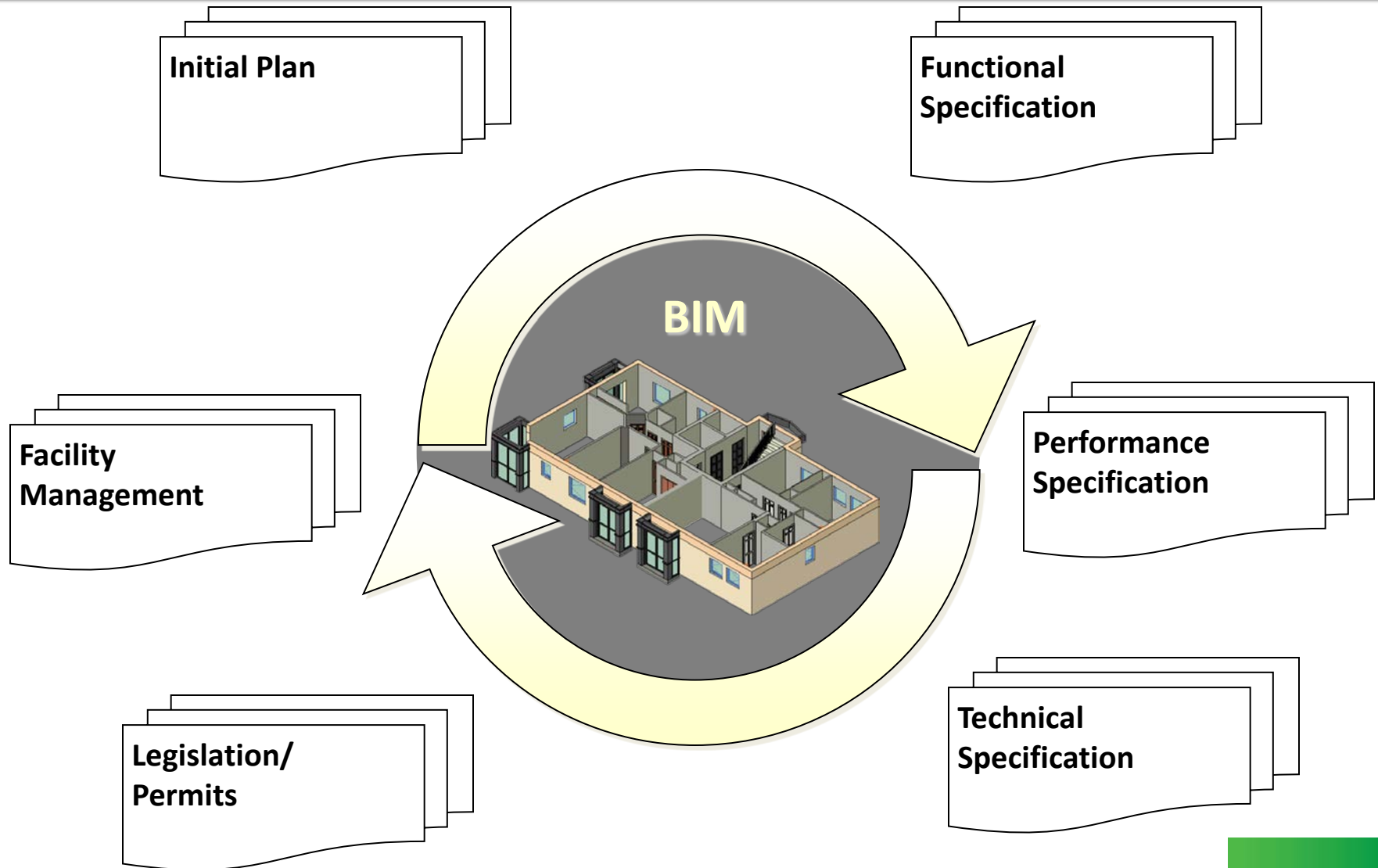
Contract
Administration

Functional
specification

Performance
specification

Technical
specification

Readable Communication





B I M

SPECIFYING

what do we have?

STABU Bouwbreed



Ruimten



Bouwsystemen & installaties



Werksoorten (STABU³)



Contracten



Kennissystemen



Producten

Entrances

- Work sections
 - +
- Buildingsystems and Installations
 - +
- Spaces
 - Areas
 - Buildingtypes
 - Spaces

Content

- Performance criteria on level of systems.
- Integration of European legislation.
- Product concepts
- Relation between products and result.

Contract templates

- UAV
 - +
- UAV-GC
 - +
- Development
 - AVA
 - Design & Build
 - Design & Construct
 - DBFMO

Infrastructure

- Online database
+
- Webservice
+
- Software

Collaboration with Bouwbreed

- Buildingdossier
- Multiple documents per project
- Document per subject or per author
- Reusable information for other players in construction process

SETUP

- Database: mySQL
- API/Webservice: SOAP
- Software: dotNET
 - Enduser
 - Maintenance
- Various components



INLOGGEN

Log in met uw werkplek licentie token.

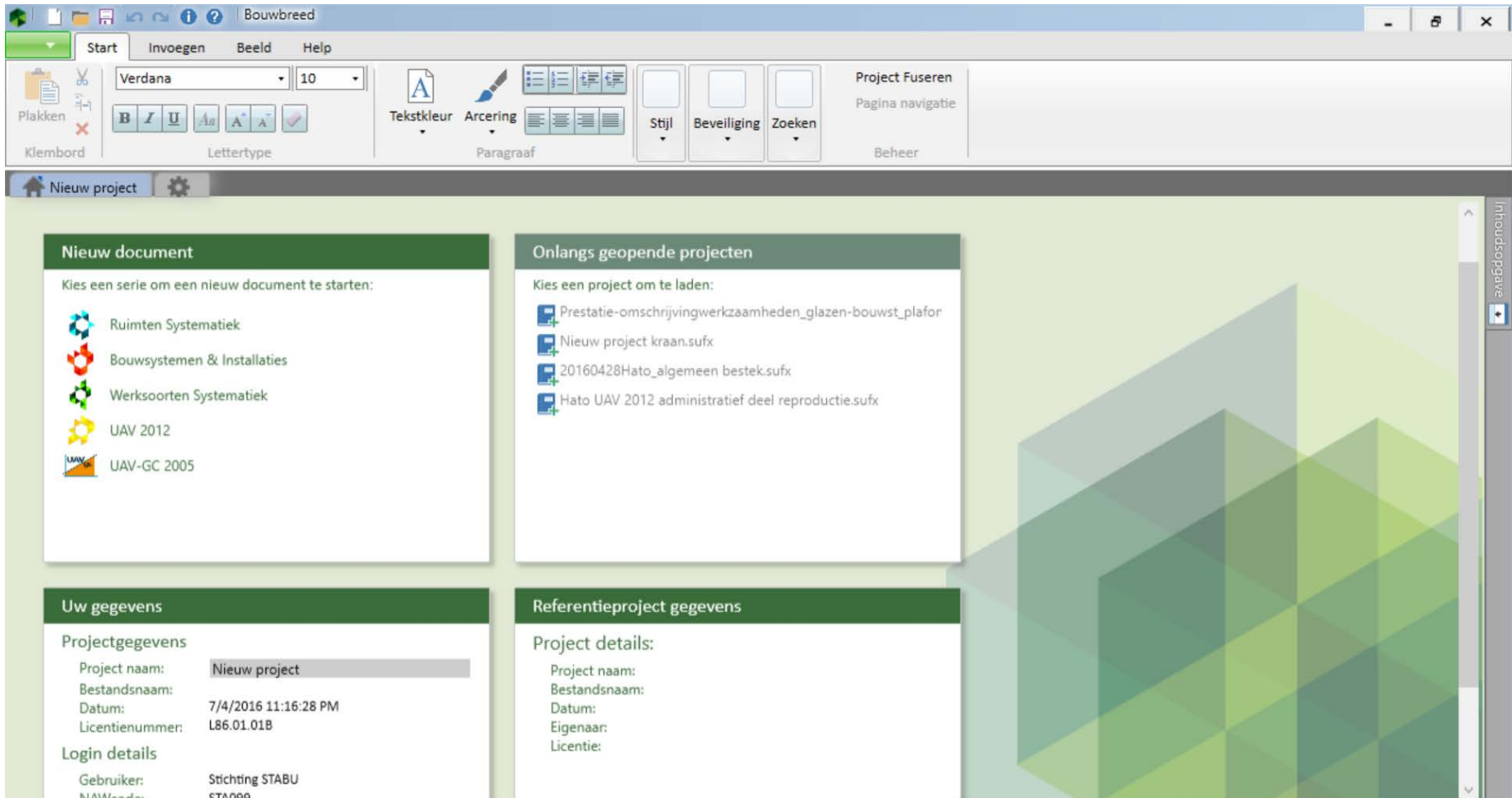
Token:

Problemen met inloggen?
Klik op de icoontjes voor hulp.



Versie: 2.0.2.0

Druk op Enter om in te loggen of Esc om te annuleren.



STABU Bouwbreed

StartBeeldHelp

AaBbCcDdEef

Bouwstelsystem

AaBbCcDdEef

NL/SfB

AaBbCcDdE

Ruimte

AaBbCcDdEef

Standaard

AaBbCcDdEef

Werksoort

Stijlen

Document vergrendeling

Beveiliging

Zoeken in Catalogus

Zoeken

Project Fuseren

Beheer

Uitloggen

Gebruik

Project Dashboard - Nieuw project

NL/SfB Classificatie X

Catalogus

1 Funderingen

2 RUWBOUW

20 - gereserveerd-

21 Buitenwanden

21.0 buitenwanden; algemeen

21.1 buitenwanden; niet constructief

21.2 buitenwanden; constructief

03 Buitenwanden

03.10 Gemetselde buitenwand - baksteen

GEMETSELDE BUITENWAND - BAKSTEEN

BUITENWAND - SPOUWMUUR

03.10.0001 Baksteen metselsteen - met mortel

BAKSTEEN MET MORTEL, BUITENWAND

1177 Baksteen metselsteen

1179 Metselmortel

22.41.0101 Cementgebonden metselmortel

0 Metselmortels, cementgebonden

1 Cementgebonden metselmortel

CEMENTGEBONDEN METSELMORTEL

22.41.0102 Kalkgebonden metselmortel

22.41.0103 Kalk/zand metselmortel

1246 Wand-dilatatie

1186 Spouwventilatie

1187 Vloerventilatie

1182 Metselwerkwapening

1184 Latei

1183 Metselwerkondersteuning

1198 Vleermuiskast

1185 Vochtkering metselwerk

1873 Dilatatievoeg, buitenwandconstructie

1180 Voegmortel metselwerk

CEMENTGEBONDEN METSELMORTEL

Fabrikant: [.....]

Mortelcentrale/fabriek: [.....]

Distributeur: [.....]

Beoogd gebruik: [.....]

Essentiële kenmerken overeenkomstig EN 998-2:2016

Morteldruksterkte (EN 1015-11) (klasse): M 1

Morteldruksterkte (EN 1015-11) (klasse): M 2,5

Morteldruksterkte (EN 1015-11) (klasse): M 5

Morteldruksterkte (EN 1015-11) (klasse): M10

Morteldruksterkte (EN 1015-11) (klasse): M15

Morteldruksterkte (EN 1015-11) (klasse): M 20

Morteldruksterkte (EN 1015-11) (Md): [.....]

Morteldruksterkte (EN 1015-11) (N/mm²): [.....]

Mortelsamenstelling in volumedelen: [.....]

Hechtsterkte (EN 1015-12) (N/mm²): [.....]

Intiële afschuifweerstand (EN 1015-2) (N/mm²): [.....]

Chloride-ionengehalte (EN 1015-17) (%): [.....]

Brandgedrag (EN 13501-1) (klasse): A1

Brandgedrag (EN 13501-1) (klasse): [.....]

Waterabsorptie (EN 1015-2) (kg/(m².min⁰.⁵)): [.....]

Waterdampdoorlatendheid (EN 1745) (μ): [.....]

Warmtegeleidingscoëfficiënt (λ) (EN 1745) (W/(m.K)): [.....]

Duurzaamheid, bestandheid tegen vorst/dooi: [.....]

Gevaarlijke stoffen: geen

Gevaarlijke stoffen: [.....]

Producteigenschappen

Mortel naar toepassing (klasse): G, voor algemene toepassing

Mortel naar toepassing (klasse): T, voor dunbed toepassing

Mortel naar toepassing (klasse): L, voor lichtgewicht metselwerk

Bindmiddel, cement (EN 197-1) (CEM I): [.....]

Bindmiddel, cement (EN 197-1) (CEM II): [.....]

Bindmiddel, cement (EN 197-1) (CEM III): [.....]

Bindmiddel, cement (EN 197-1) (CEM IV): [.....]

Bindmiddel, cement (EN 197-1) (CEM V): [.....]

Bindmiddel, cement (EN 197-1): [.....]

Hoeveelheid cement (%): [.....]

Vulstof (EN 459-1): [.....]

Hoeveelheid kalk (%): [.....]

Toeslagmateriaal: [.....]

Hoeveelheid toeslagstoffen (%): [.....]

Gespecificeerde correlatieformule toeslagmateriaal (EN 1015-11) (mm³): [.....]

Verbinding: Verbonden

Document Status: Open

Licentie: L86.01.01B

120%

STABU

What is
STABU

What is STABU Foundation

Not-for-profit Foundation
promoting unambiguous
communication in the construction
industry,
founded in 1976.

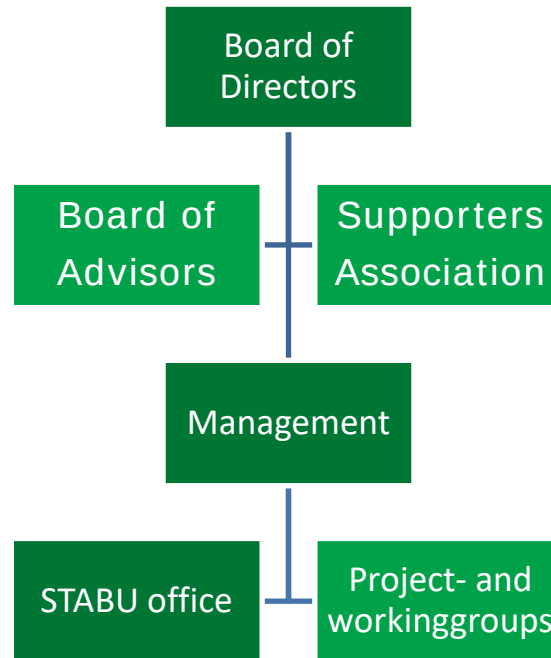
Why **STABU**

Why STABU

- Need for a standard specification system in construction industry
- First version ready in 1986.
- Composition of two remaining systems ready end of 1990.
- Development towards communication standards for entire construction process starting 2005.

Who is
STABU

STABU Foundation



Products / Activities



Board of Directors STABU

Owners
Government

Architects/
Advisors

Contractors

HVAC

Manufacturers



Rijksgebouwendienst
Ministerie van Binnenlandse Zaken en
Koninkrijksrelaties



UNETO-VNI



Commando DienstenCentra
Ministerie van Defensie



Vereniging van
Nederlandse Gemeenten

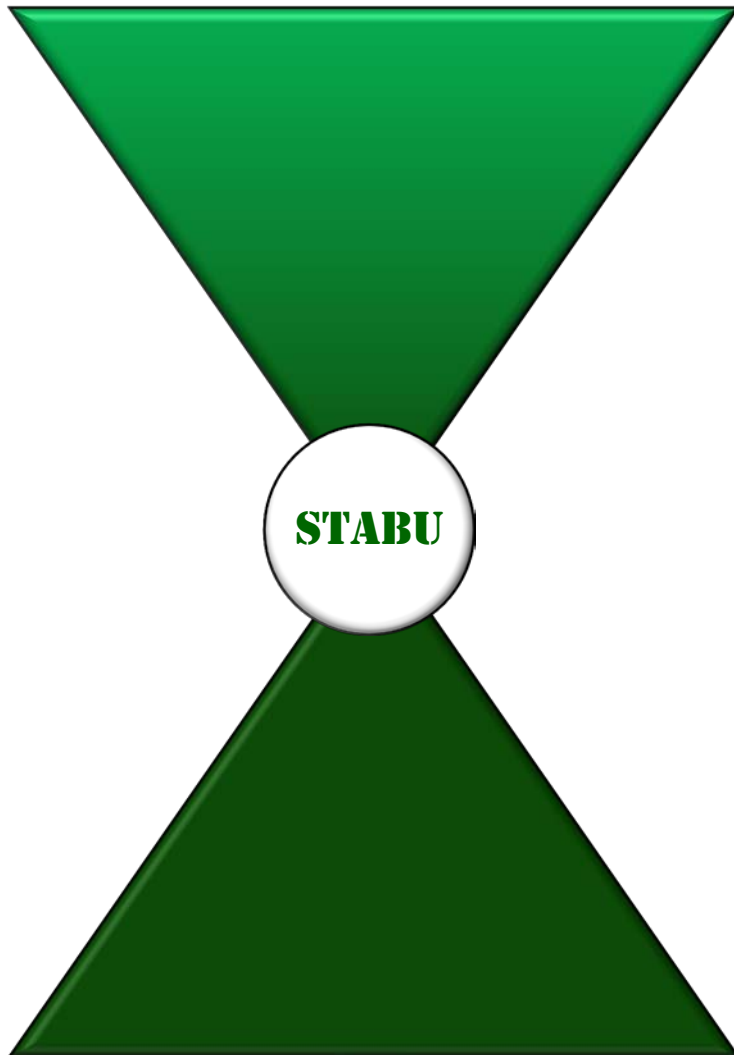
vereniging van
woningcorporaties



STABU

POSITION

The hinge for knowledge



Bringing together knowledge and organisations

SBR, BRIS, NEN, SBK, NBD, CROW, CUR
RGD, DVD, IBR

BNA, Bouwend Nederland, Aedes, Uneto-VNI,
NvtB, NL-Ingenieurs,

Publishing products with integrated knowledge

Standards

Administrative conditions

STABU²

STABU^{ELEMENT}

Table Buildings, Building types, Spaces

Specifications

Contract rules

Product- and result specifications

NEN / BRL specifications

Functional specifications

Performance specifications

Knowledge products

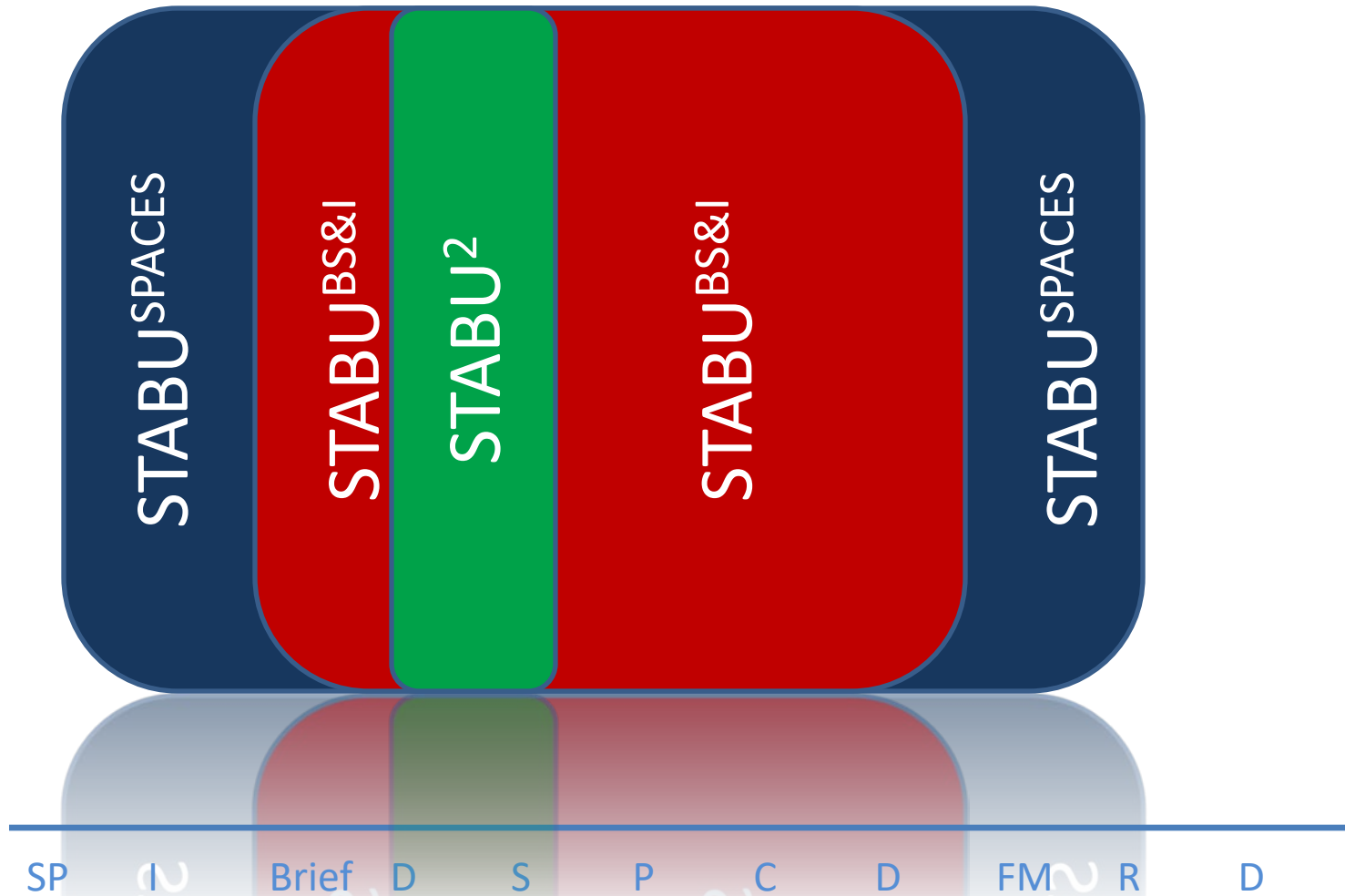
Technical help information

Knowledge system 'construction law'

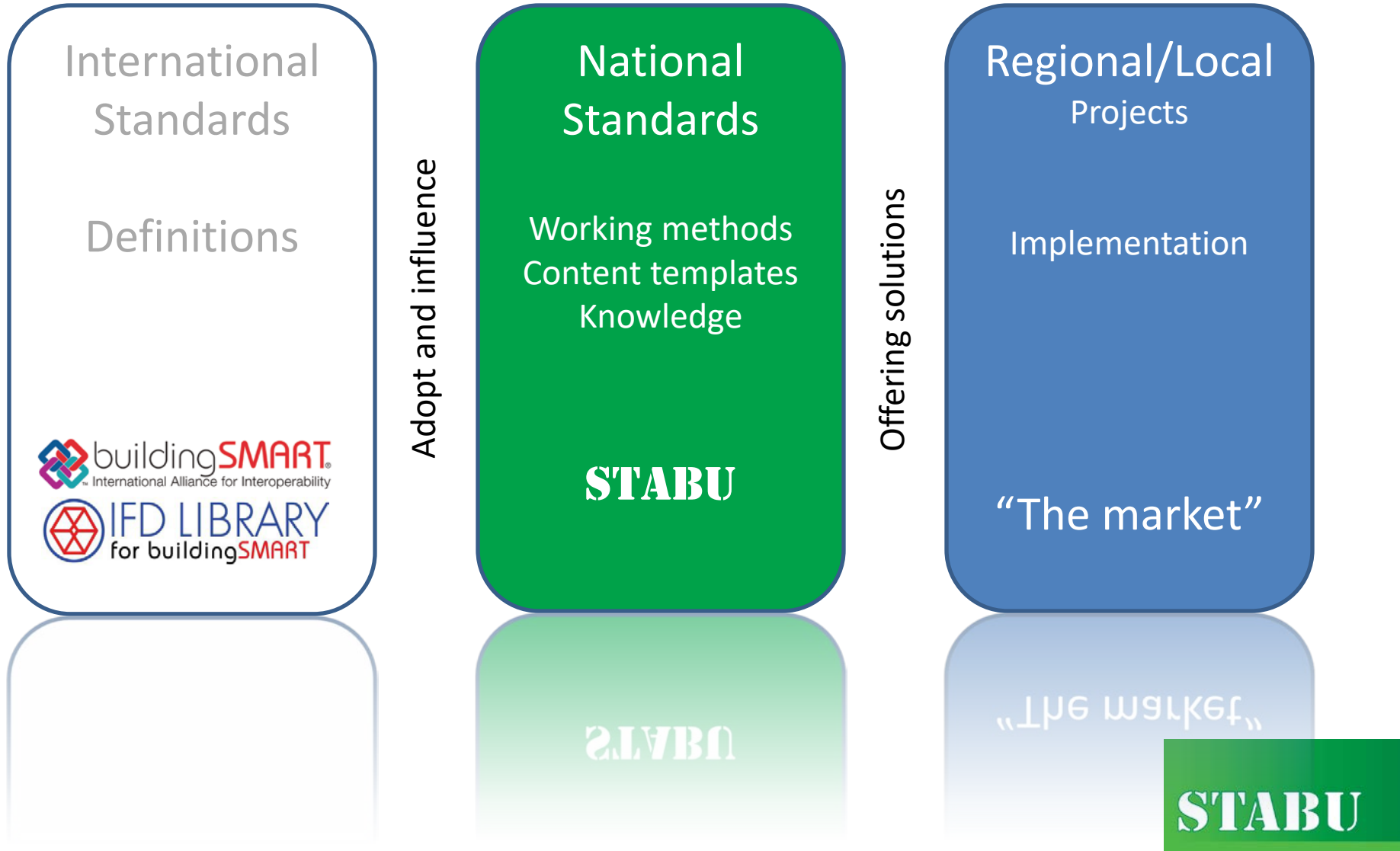
STABU Standard

STABU

Position in the construction process



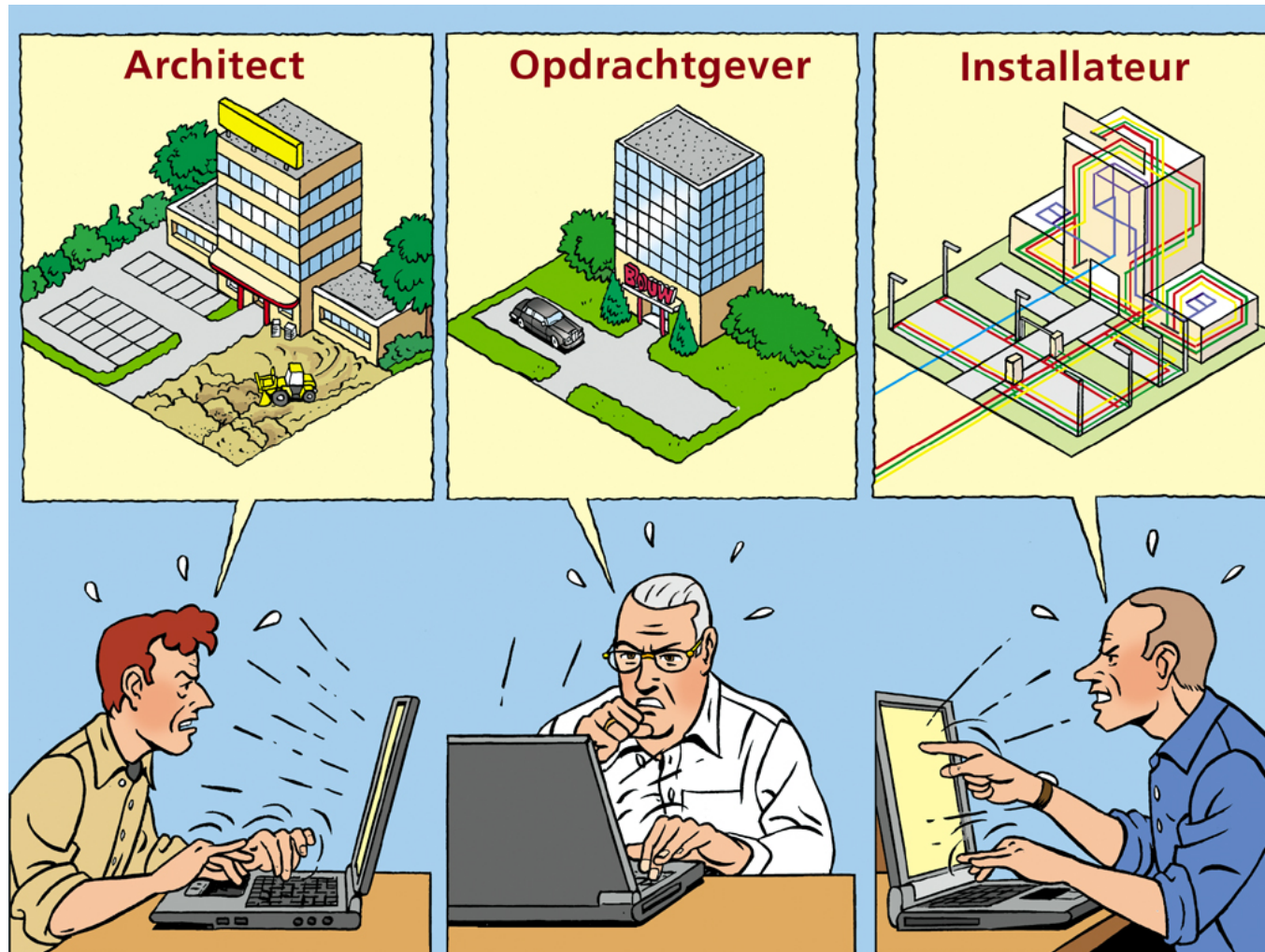
Positioning



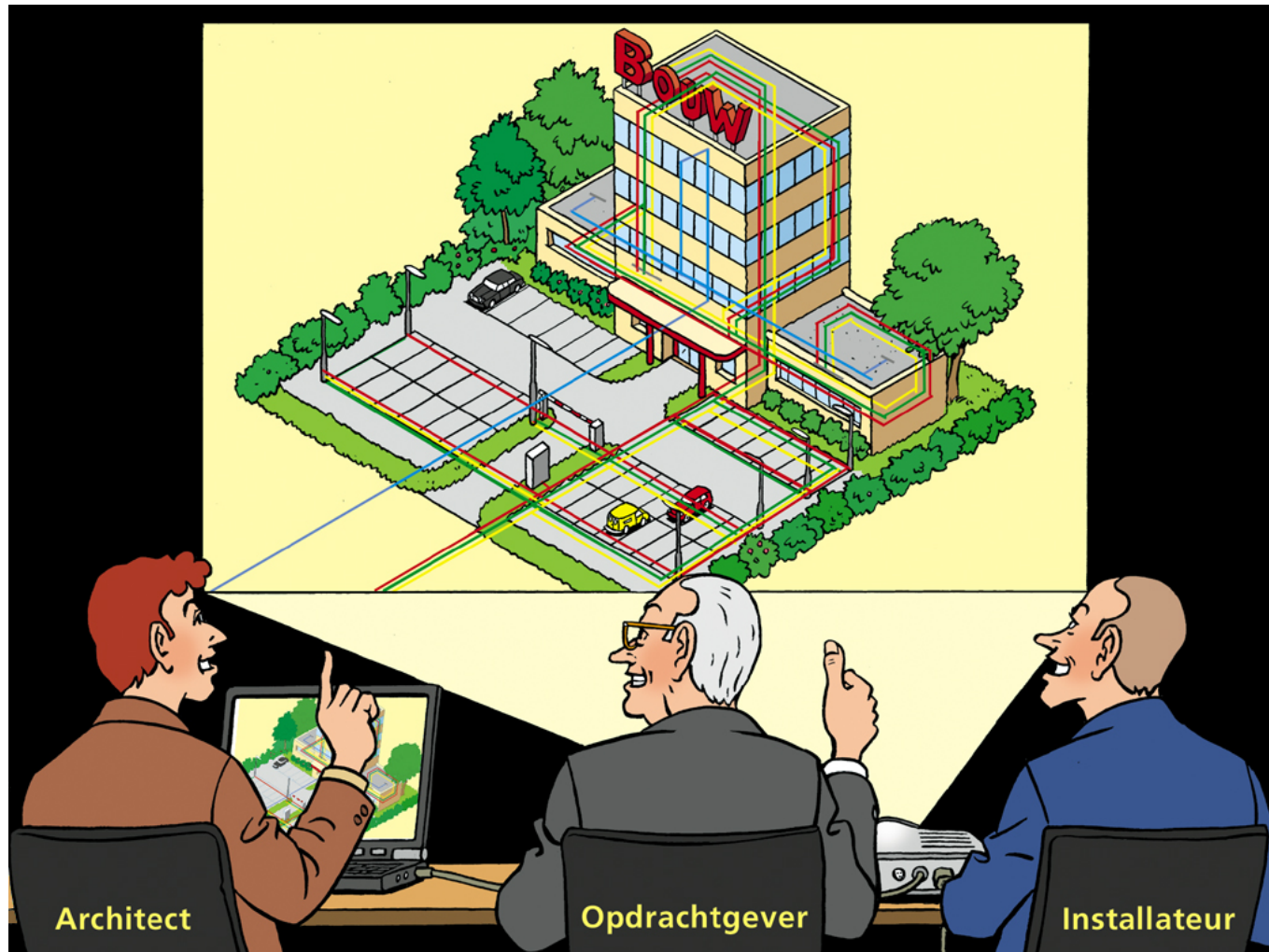
Connect to the road ...



From ...



... to



Thank you for your attention

