

CZECH TECHNICAL UNIVERSITY IN PRAGUE
Faculty of Civil Engineering
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CzBIM Introduction

and overview of BIM Education in Czech Republic

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A few words about presenter...

- Lecturer at CTU in Prague
 - Faculty of Civil Engineering
 - Department of Construction Management and Economics
 - Topics
 - Building Information Modeling
 - Risk and Financial Management
- Member of Czech BIM Council (CzBIM)



Czech BIM Council (CzBIM)

- Established in May 2011
- Non-profit organization
- Web page www.czbim.org
- Aim: To systematically help with BIM implementation in the Czech market
 - Main Goal is *to set up BIM for technical use among all participants of the construction process within the whole construction life cycle.*
- So how do we do that?

Czech BIM Council (CzBIM)

- Propagation
- Communication and cooperation
- Implementation support

Czech BIM Council (CzBIM)

- Propagation

- Conferences and workshops organization and participation

- BIM Day 2015

- Annual international Czech BIM oriented conference
- 15 October
- Prague, Czech National Library of Technology
 - Technická 6, Prague 6



Czech BIM Council (CzBIM)

- Propagation
 - Conferences and worksh
 - Publication



Czech BIM Council (CzBIM)

- Propagation
 - Conferences and workshops organization and participation
 - Publication
 - Consulting

Czech BIM Council (CzBIM)

- Communication and cooperation
 - Cooperation with all construction process participants
 - Use of academic research and its implementation into practice
 - Mediating communication between public and private sectors
 - Practice
 - Government
 - Universities
 - Other parties (chambers, unions, councils etc.)

Czech BIM Council (CzBIM)

- Implementation Support
 - BIM & Standards and Legislation workgroup
 - Established some time ago
 - Cooperates with government and practice
 - Standards, directives and other legislation adoption with regard to BIM
 - BIM & Education workgroup

BIM & Education

- BIM implementation into education is important
- It has to cover all parties connected with education process
- It needs to be conceptual

BIM & Education

- Educational system in Czech Republic
 - Preschool education
 - Primary education
 - Secondary education
 - Tertiary education
 - Perpetual (lifelong) education (Private sector education)

BIM & Education

- Education providers
 - Preschool education
 - Primary education
 - Secondary education
 - Tertiary education
 - Perpetual (lifelong) education (Private sector education)

BIM & Education

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 - ~~Preschool education~~
 - Primary education
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BIM & Education

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 - ~~Preschool education~~
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BIM & Education

- Education providers
 - ~~Preschool education~~
 - ~~Primary education~~
 - **Secondary education**
 - **Technical oriented high schools**
 - Tertiary education
 - Perpetual (lifelong) education (Private sector education)

BIM & Education

- Education providers
 - ~~Preschool education~~
 - ~~Primary education~~
 - Secondary education
 - **Tertiary education**
 - **Technical colleges and universities**
 - Perpetual (lifelong) education (Private sector education)

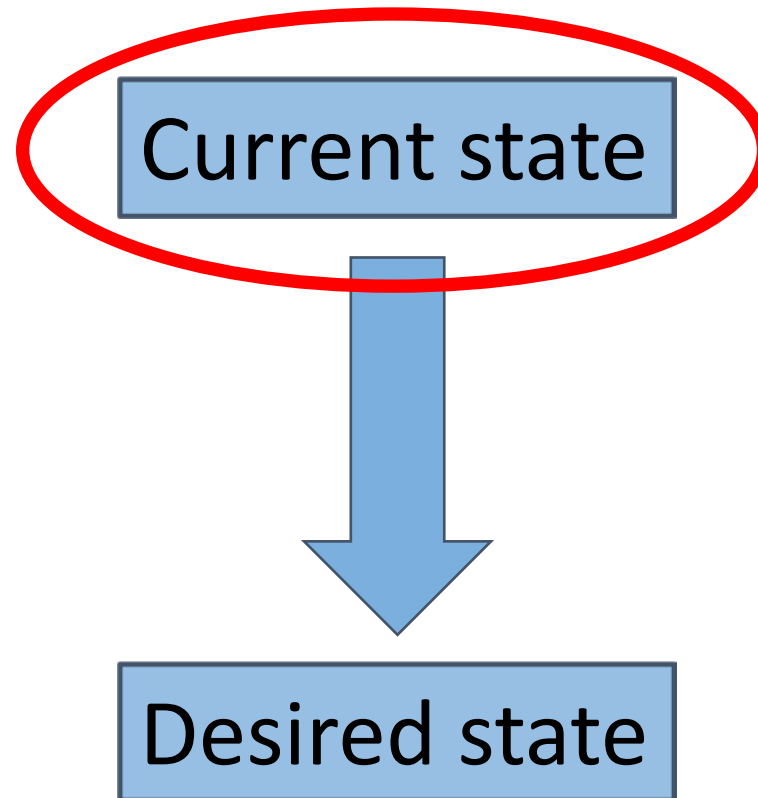
BIM & Education

- Education providers
 - ~~Preschool education~~
 - ~~Primary education~~
 - Secondary education
 - Tertiary education
 - Perpetual (lifelong) education (Private sector education)
 - Universities
 - Educational centres
 - Practice itself (on-the-job trainings etc.)
 - Other institutions etc.

BIM & Education

- Education recipients
 - Pupils
 - Students
 - Workers
 - Companies
 - Public
 - Government
 - ...

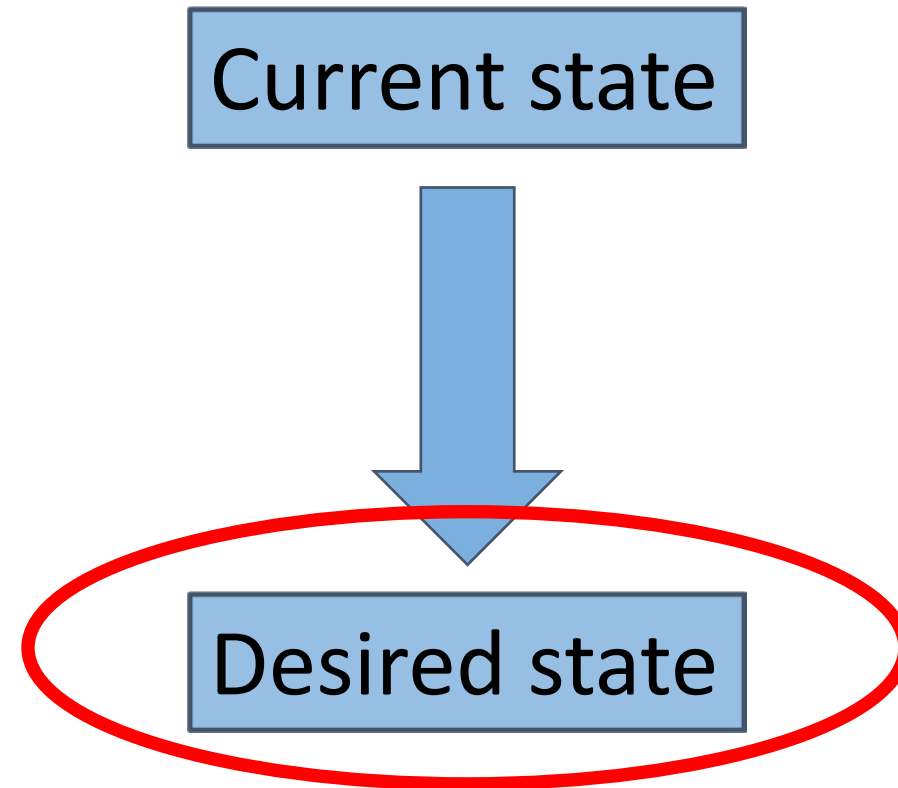
BIM & Education



BIM & Education

- Current state
 - We DO have BIM in our education to some extent
 - Providers have usually individual approach to the client
 - Opinions on what actually is BIM differ a lot
 - Often there is no management support of BIM education
 - Communication between providers is minimal

BIM & Education



BIM & Education

- Desired state
 - Education recipients will learn BIM
 - What is BIM?

Know how to model

Know tools

Autodesk

Bentley

Nemetschek

Graphisoft

Tekla

Know how to use model

BIM & Education

- Desired state
 - Education recipients will learn BIM
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BIM & Education

- Desired state
 - Education recipients will learn BIM
 - What is BIM?

Project information modeling

Programming

Database knowledge

IFC
COBie
QTie

Construction

Know how to model

Know tools

Know how to use model

Know history of BIM

Know future of BIM

~~Autodesk Bentley
Nemetschek Graphisoft
Tekla Everything~~

Understand basics of BIM

Or only something?

BIM & Education

- Desired state
 - Education recipients will learn BIM
 - What is BIM?
 - Should everyone know the same things?

Architect

Structural engineer

Project manager

Designer

Contractor

Facility manager

Building office

BIM manager

Geodetic engineer

Owner

Government

BIM & Education

- Desired state
 - Education recipients will learn BIM
 - What is BIM?
 - Should everyone know the same things?

Building structures Technical networks Water structures

Transport infrastructure Power plants

BIM & Education

- Desired state
 - Education recipients will learn BIM
 - What is BIM?
 - Should everyone know the same things?
 - ...
 - What does private sector needs?
 - How to not stay behind of rapidly changing technology environment?
 - How hard should we push?

BIM & Education

- Desired state
 - Education recipients will learn BIM
 - Education recipients will know BIM
 - What should they know?
 - How to check if they really know it?
 - ...

BIM & Education

- Desired state
 - Education recipients will learn BIM
 - Education recipients will know BIM
 - Education recipients have market value
 - What does private sector wants?
 - What does research wants?
 - Is there anyone else who wants something BIM related?
 - ...

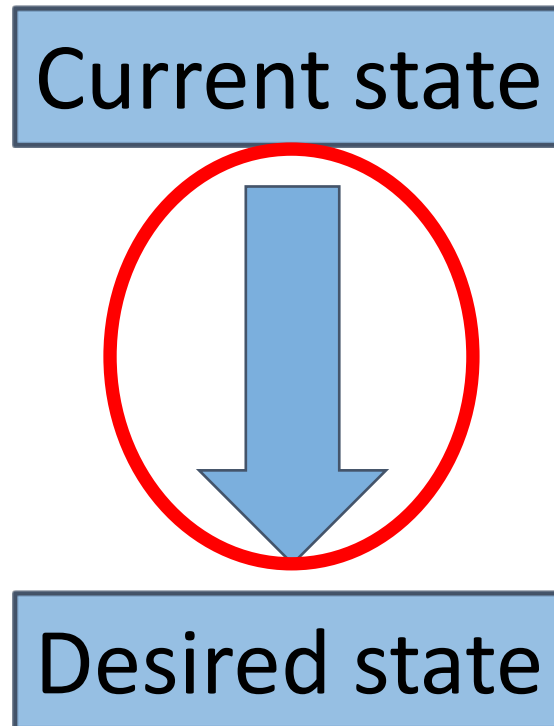
BIM & Education

- Desired state
 - Education recipients will learn BIM
 - Education recipients will know BIM
 - Education recipients have market value
 - Top level education in Czech Republic
 - *What is top level in world context?*
 - *How does it work together with local demand?*

BIM & Education

- Desired state
 - Education recipients will learn BIM
 - Education recipients will know BIM
 - Education recipients have market value
 - Top level education in Czech Republic
 - ...

BIM & Education



BIM & Education

- So how can we reach our desired state?
 - Tell everybody what to do!

BIM & Education

- So how can we reach our desired state?
 - ~~Tell everybody what to do!~~
 - Make everyone do what we say!

BIM & Education

- So how can we reach our desired state?
 - ~~Tell everybody what to do!~~
 - ~~Make everyone do what we say!~~
 - Don't do anything, it will happen on its own in time...

BIM & Education

- So how can we reach our desired state?
 - ~~Tell everybody what to do!~~
 - ~~Make everyone do what we say!~~
 - ~~Don't do anything, it will happen on its own in time...~~
 - Let someone else do it...

BIM & Education

- So how can we reach our desired state?
 - ~~Tell everybody what to do!~~
 - ~~Make everyone do what we say!~~
 - ~~Don't do anything, it will happen on its own in time...~~
 - ~~Let someone else do it...~~
 - **Help to implement BIM into education somehow!**

BIM & Education

- Main support pillars
 - Creating dialog through educational system
 - Learning lessons abroad
 - Answering key questions about BIM education
 - Creating support documents
 - Running information portal

BIM & Education

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 - Creating dialog through educational system
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BIM & Education

- Workgroup
 - Different levels of members
 - Active
 - Semiactive
 - Passive
 - Two main topics
 - Education for pupils and students
 - Education for practice

BIM & Education

- Current progress
 - Key topics identified
 - Strategic document created
 - First official meeting of active members is coming

BIM & Education

- Main pillars of conception for BIM education implementation
 - BIM definition from educational point of view (WHAT)
 - BIM for education providers
 - BIM for education receivers
 - Knowledge correlations

BIM & Education

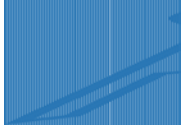
- Main pillars of conception for BIM education implementation
 - BIM in Czech educational system (WHERE)
 - Current state analysis
 - Desired state proposal
 - Needed changes and relevant parties identification
 - Obstacles identification

BIM & Education

- Main pillars of conception for BIM education implementation
 - BIM implementation into education (HOW)
 - Secondary education
 - Tertiary education
 - Practice education
 - Public education

BIM & Education

- Expected results
 - Accessible documents with all mentioned information
 - Everyone may or may not use them as they wish
 - Supplement networking
 - Information sharing



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Thank you for your attention

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