Quality & openness - open academic e-textbook for STEM

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OCWC Global 2014, Ljubljana

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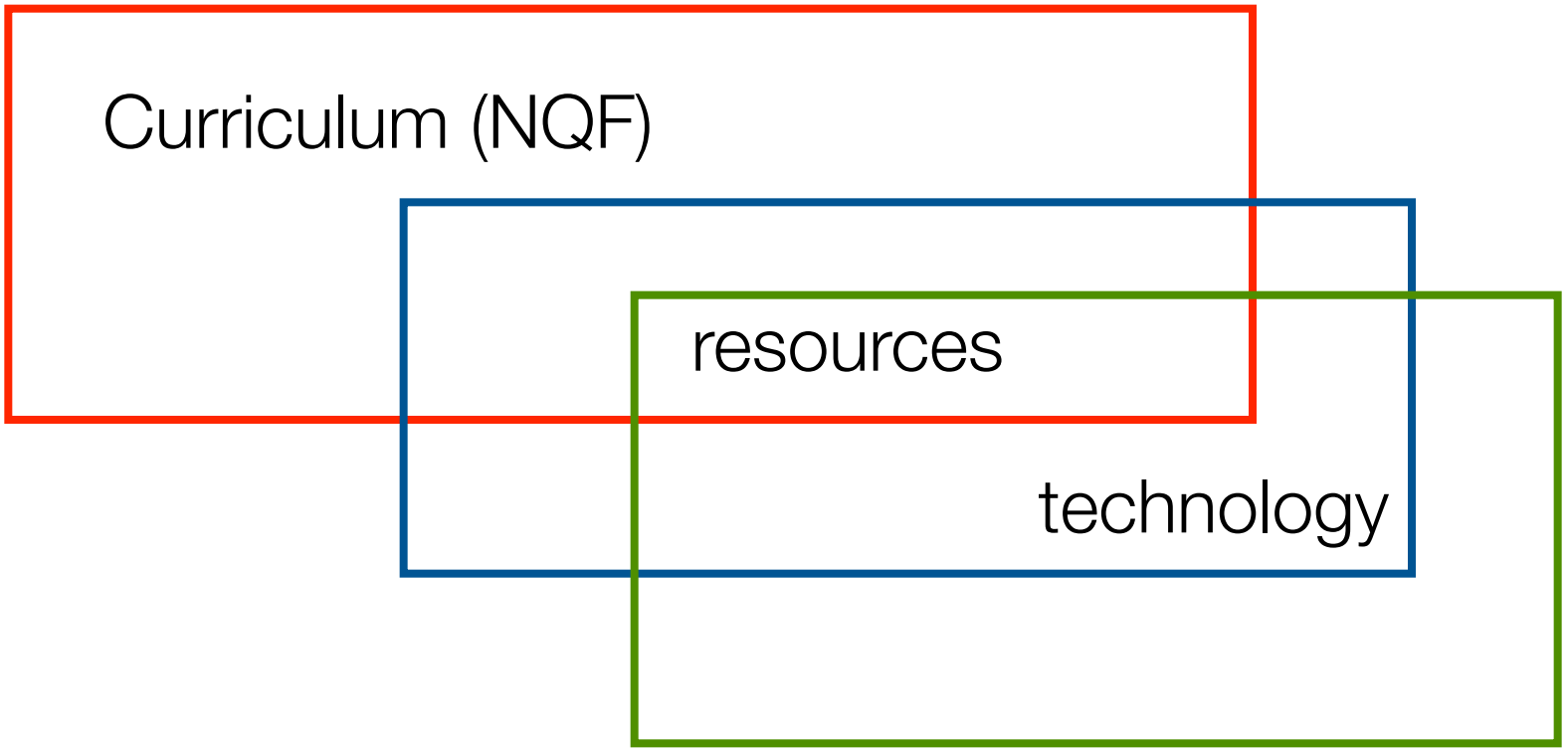
Challenges in HE in Poland



Challenges in HE in Poland - curriculum

adjustment of teaching to the requirements of the job market and education for the future (NQF)

NQF requires up-to-date educational materials to be provided (too expensive for students)

Challenges in HE in Poland - resources

students use materials available online (questionable quality)

lack of high quality materials for teachers to prepare education resources/OER

Challenges in HE in Poland - ICT skills

Digital School programm (ICT skills equipped learners become students)

unlimited access to the content

easy use and adaptation

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Mission - *openness*

Our mission is to create effective mechanisms for opening educational materials, e-textbooks and other educational resources developed by academic teachers at AGH

AGH E-PODRĘCZNIKI AGH OTWARTE ZASOBY

Openness = access

for everyone

no fees and login/password required

to high quality resources

for users with special learning needs

to the source of material for adaptation (open formats)

to open tools enhancing learning process

Opennes at AGH - how did we start

OER study of the academic community (2013)

2 682 academic teachers (the complete response rate of 25%)

46% declared recognition of the idea of OER

35% presented fully formed attitude towards OER

5% of academic teachers were not able to assess their knowlege

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OER study (2013) - knowlegde on Open AGH

40% of respondents recognised it
21% browsed materials published there
only **4%** used the materials for educational purposes

13% had experience in publishing and sharing their educational resources on the Internet

only **2%** have published own materials in Open AGH repository.

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OER study (2013) - quality

60% recognise the potential of the quality of OER

improving the quality of teaching materials
improving the quality of classes
improving development of better curricula

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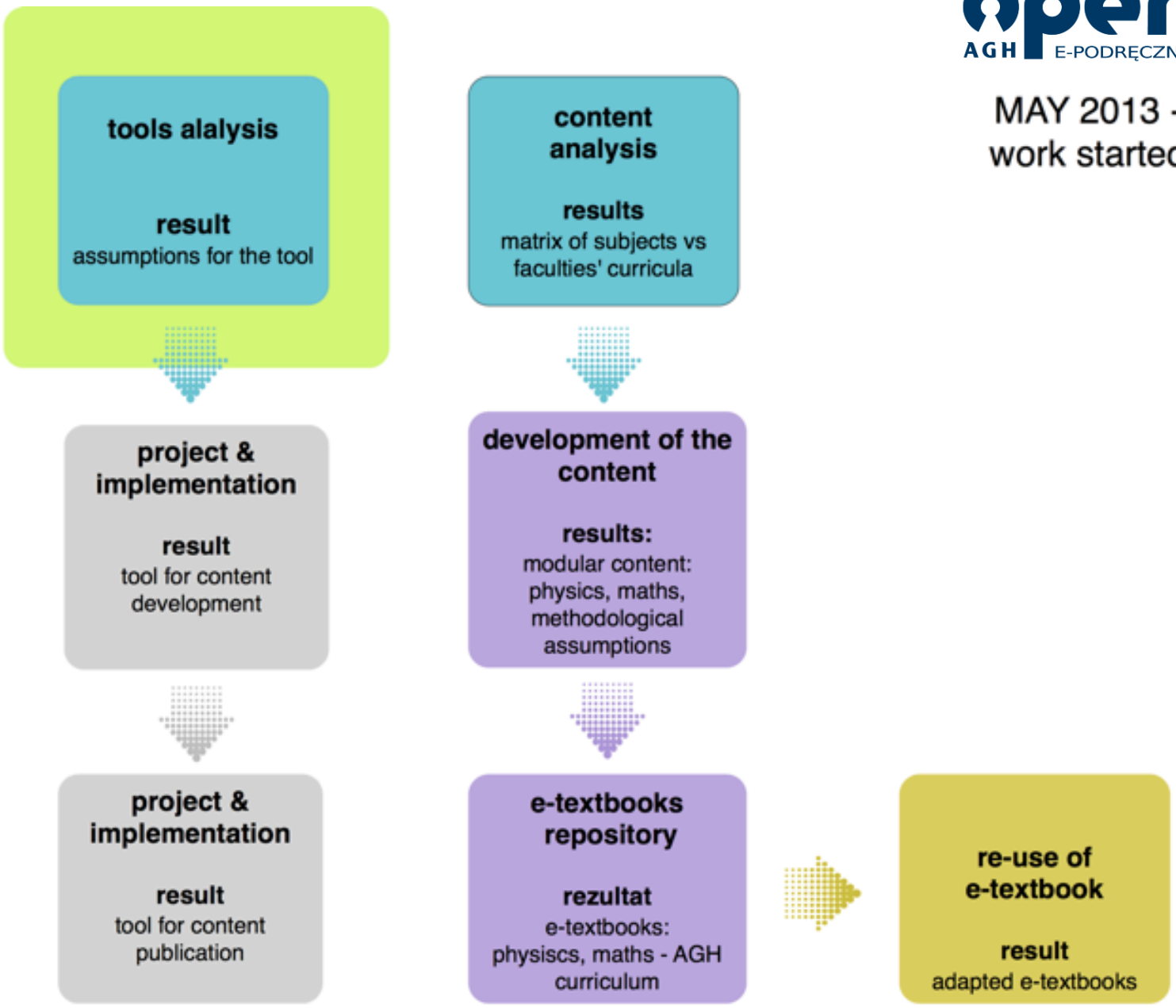
Open academic e-textbooks

Variety of formats
Closed formats
Difficulties with adaptation
Out-of-dated

AGH open E-PODRĘCZNIKI

open source platform
(for development, publishing, use)

open content for
modules & e-textbooks
(NQF physics and maths)



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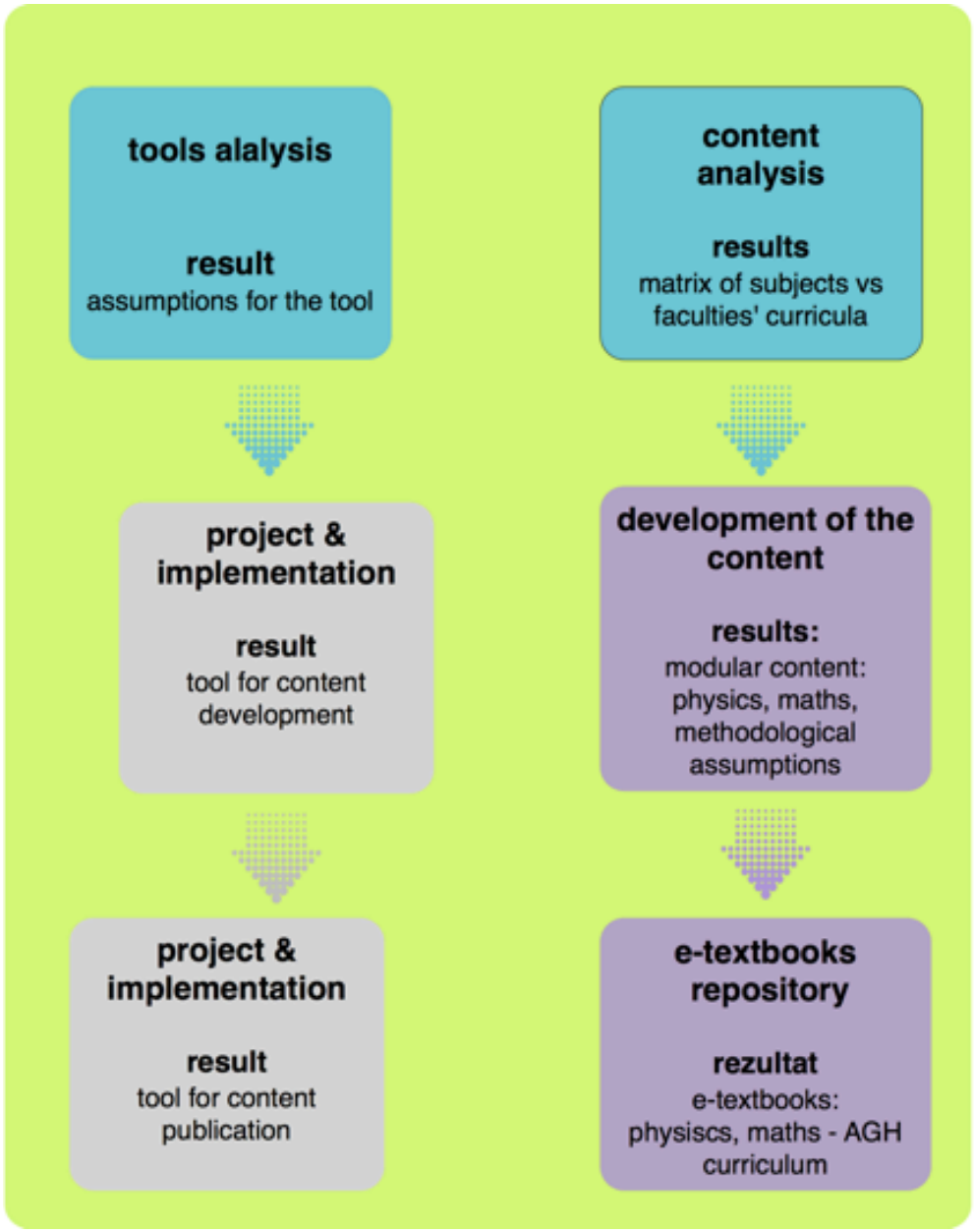
MAY 2013 -
work started

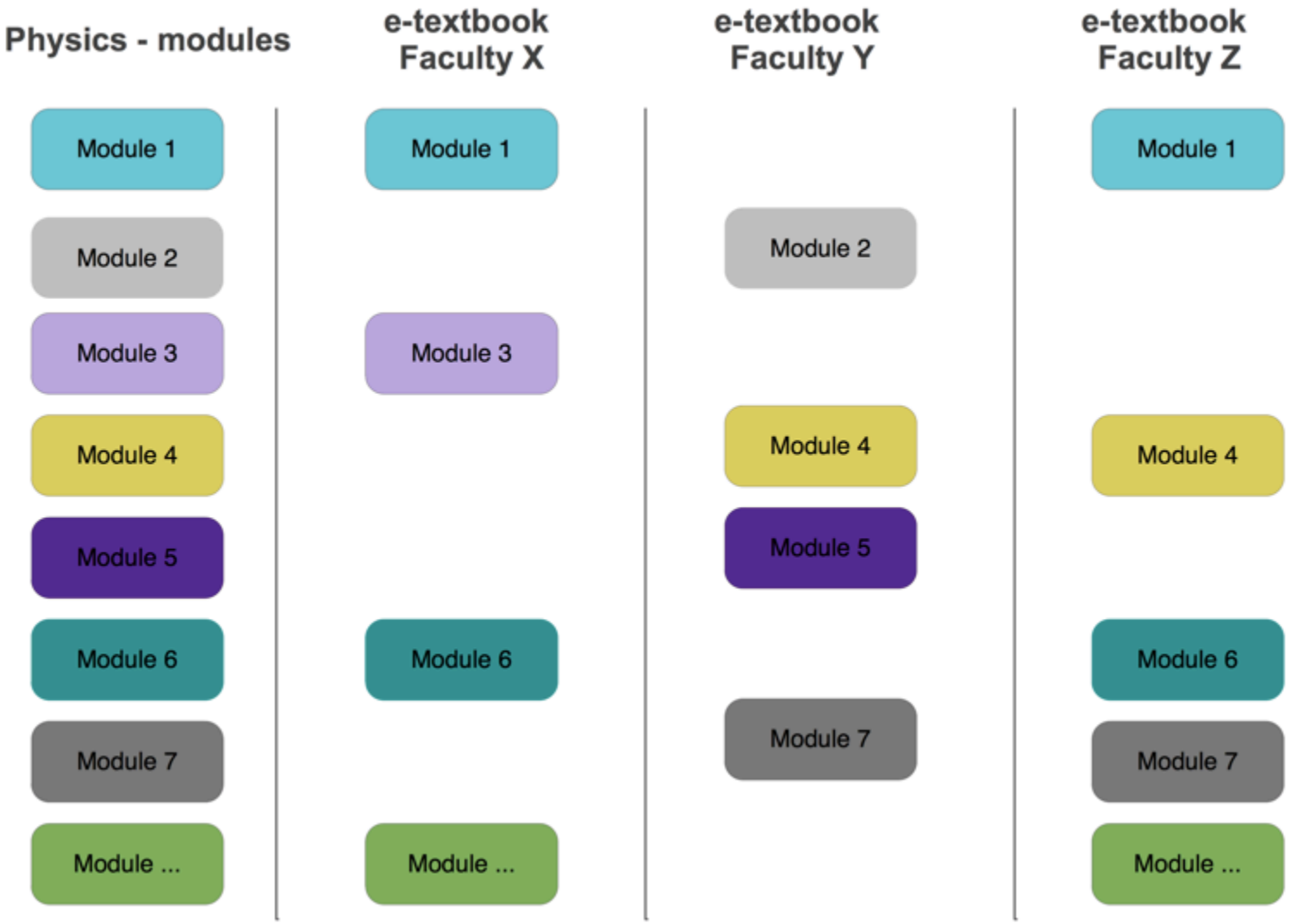


open AGH E-PODRĘCZNIKI

APRIL 2014

1st pilot modules for physics

Open AGH e-textbooks - modularity



Open AGH e-textbooks – target group

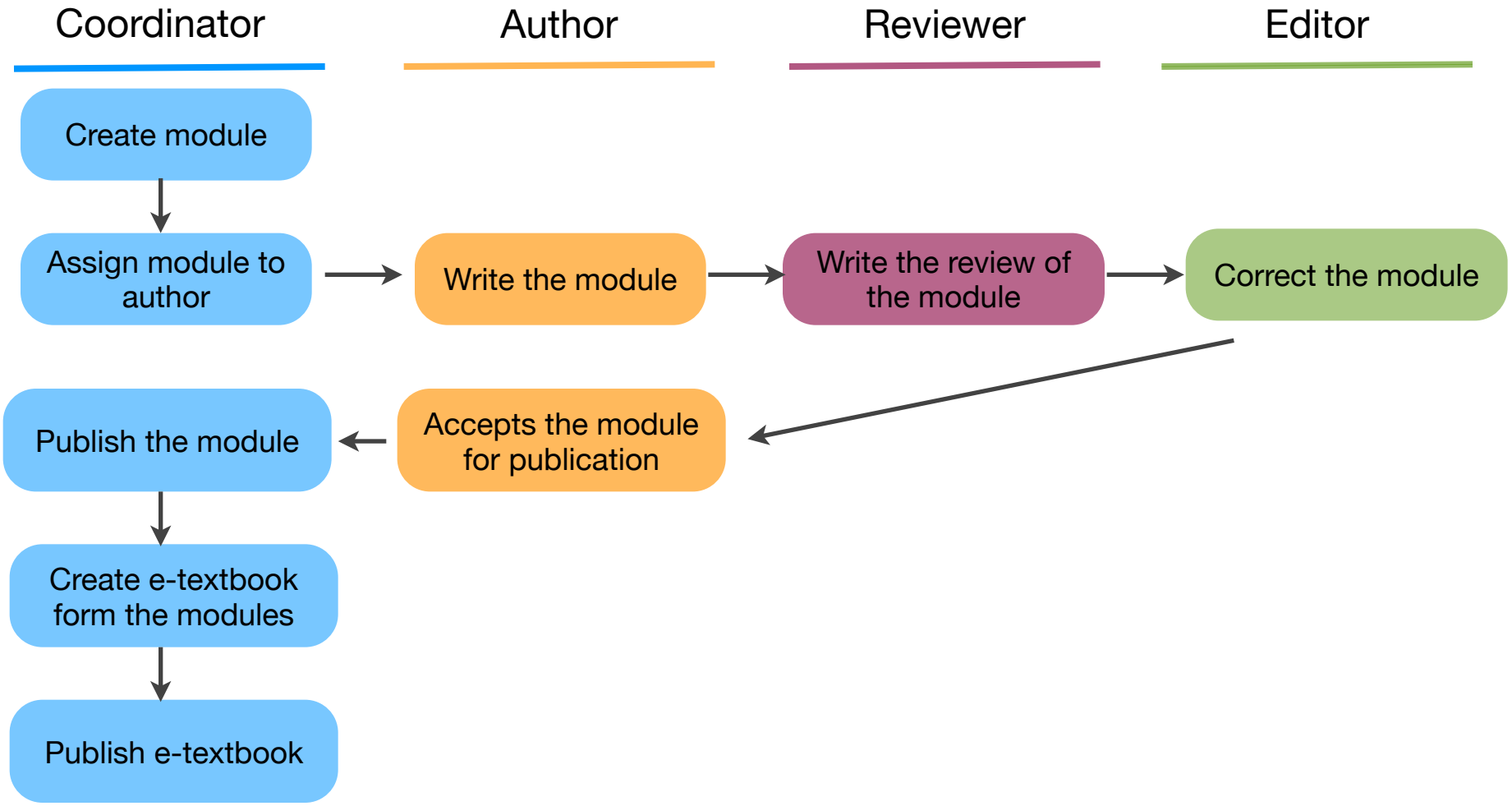
Creators of core content

subject coordinator
author
reviewer
editor

Users of content

academic teacher
student
teacher
school student
learner
.
.
everyone

From module to e-textbook



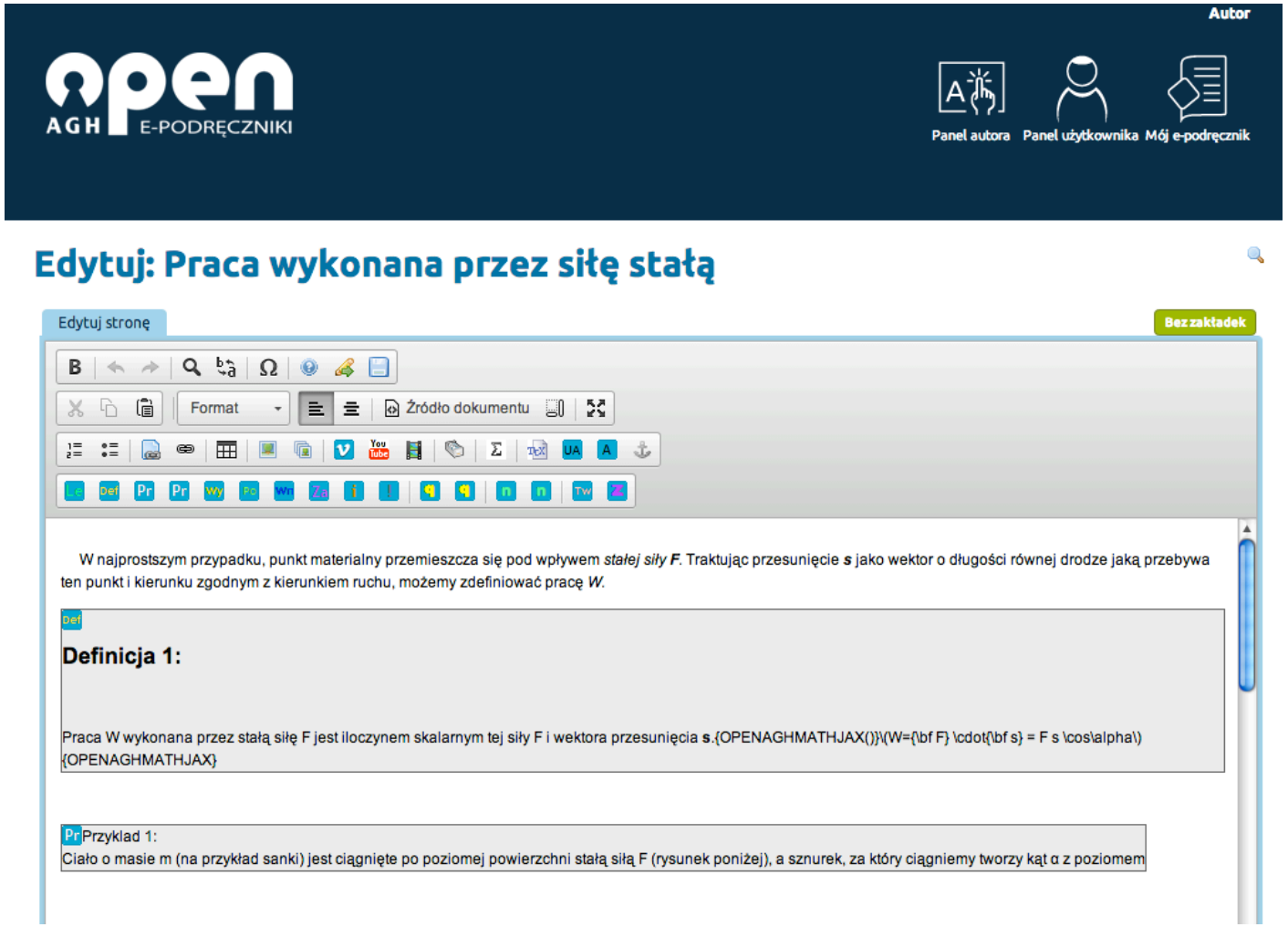
Working on the content

Online editor (TikiWiki)

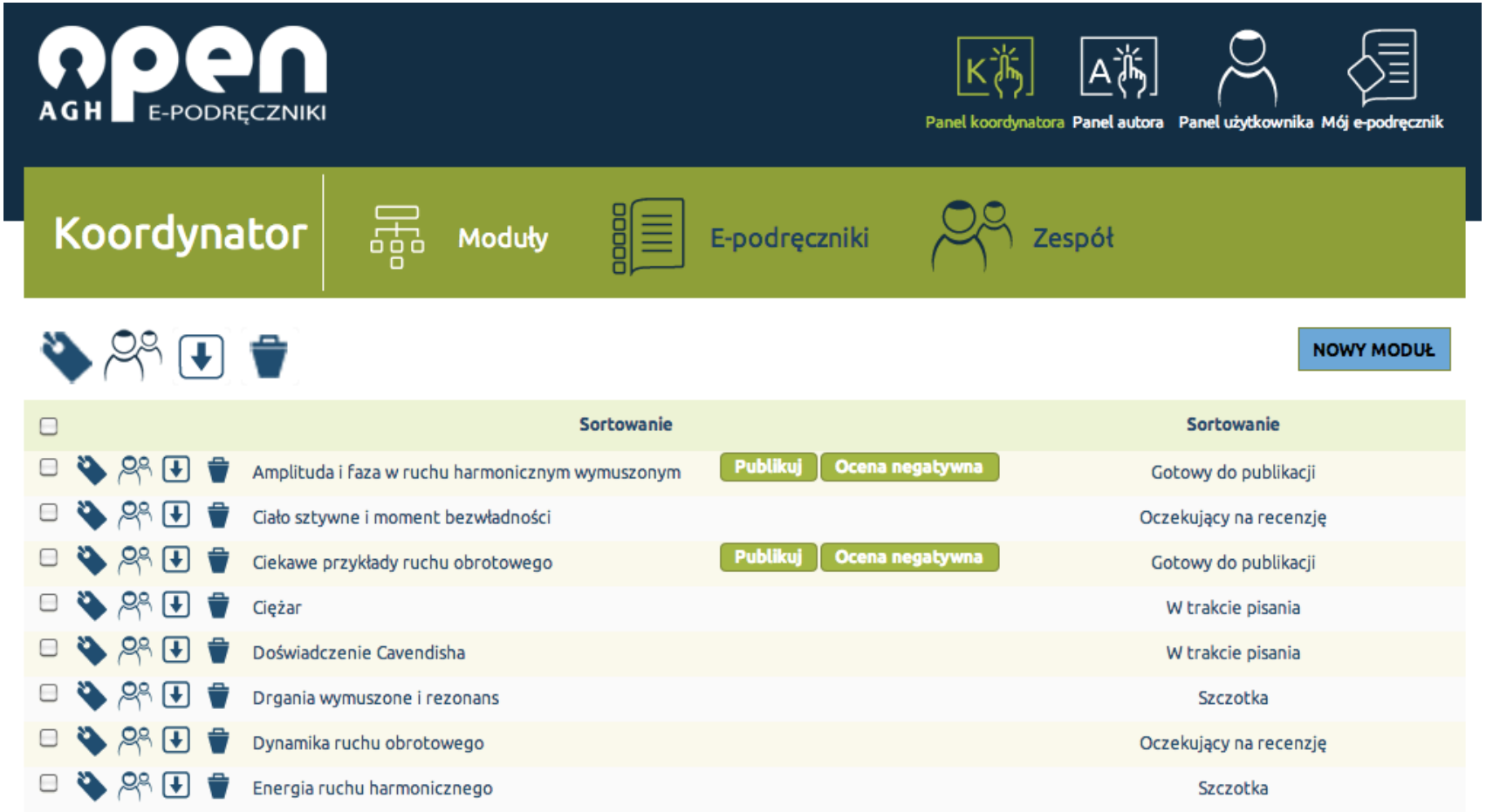
Import from LaTeX (plug-in LaTeX2Wiki)

Review and editor's correction process

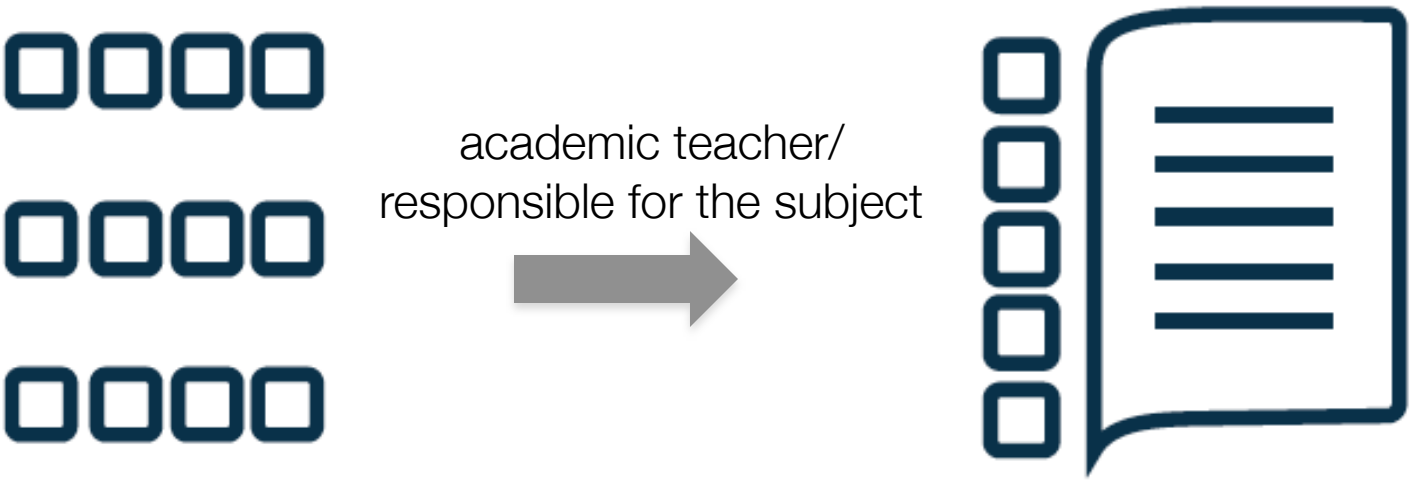
Working on content - online editor



List of modules - result of author's work



Building e-textbooks from modules



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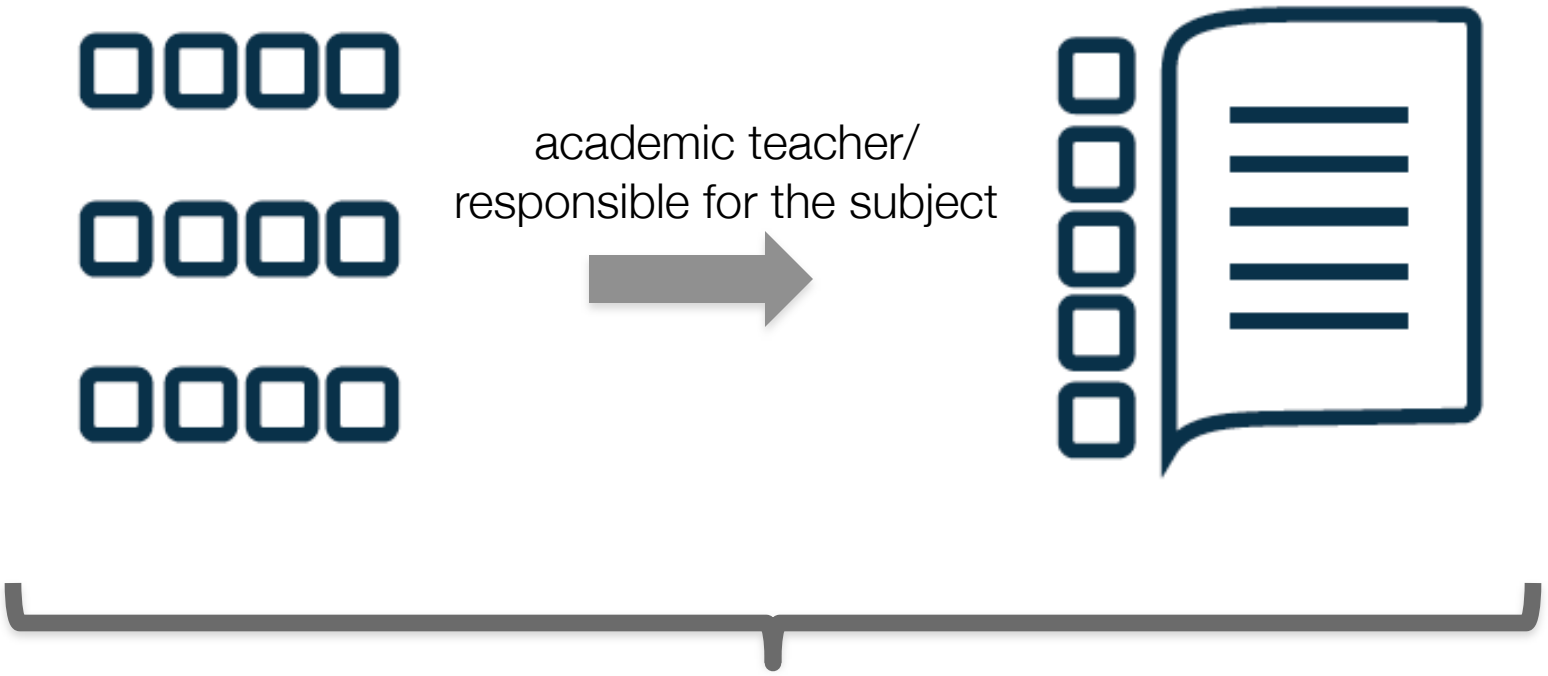
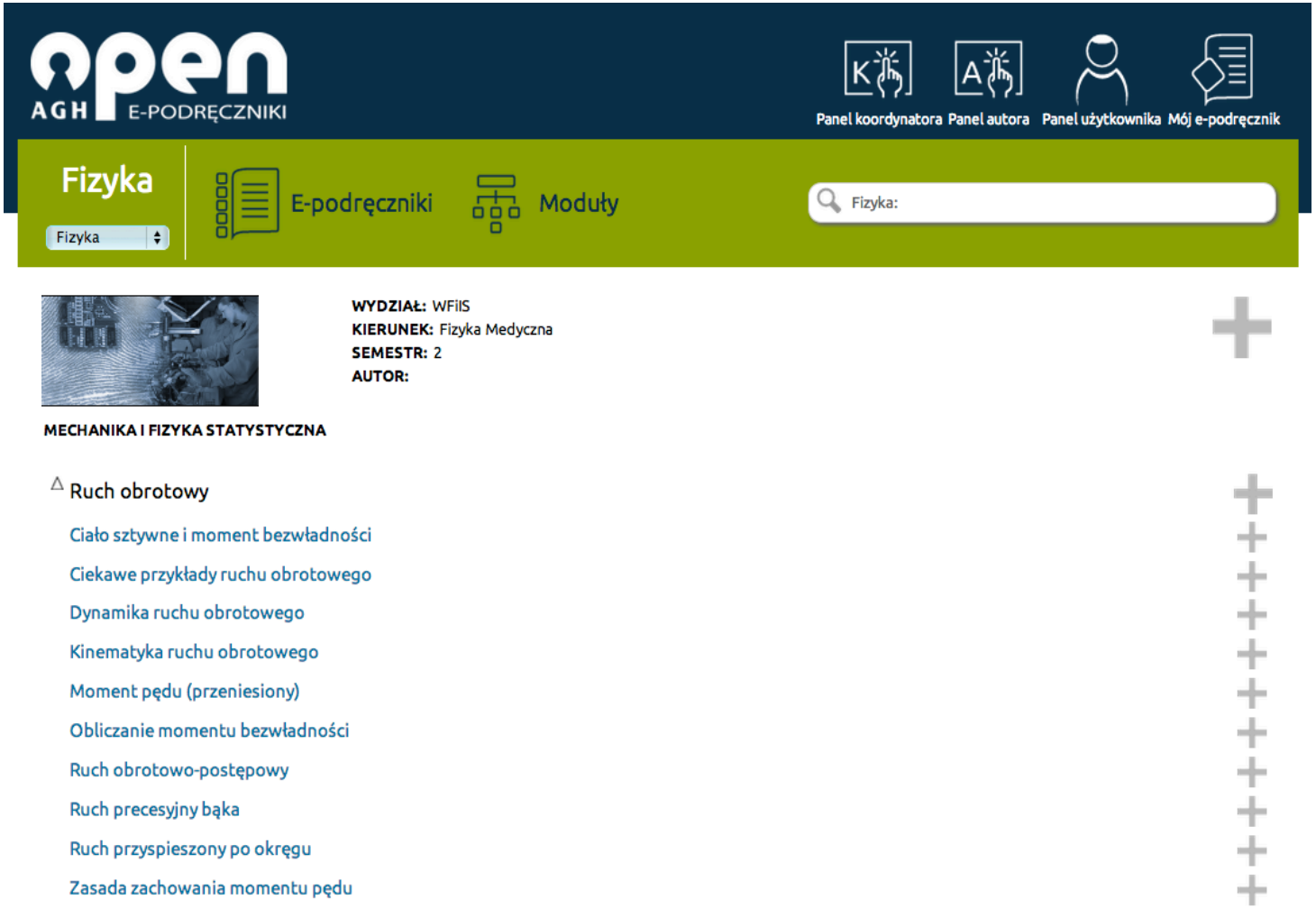
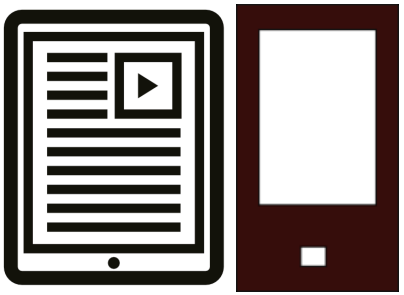


Exemplary e-textbook



Fexibility of e-textbook use and adaptation

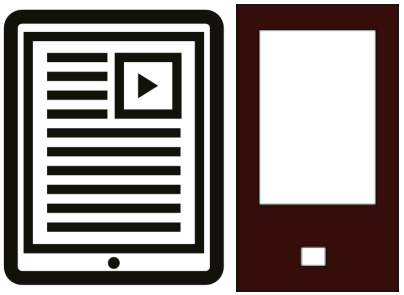
PDF, DjVu



ePUB, MOBI, AZW3

Fexibility of e-textbook use and adaptation

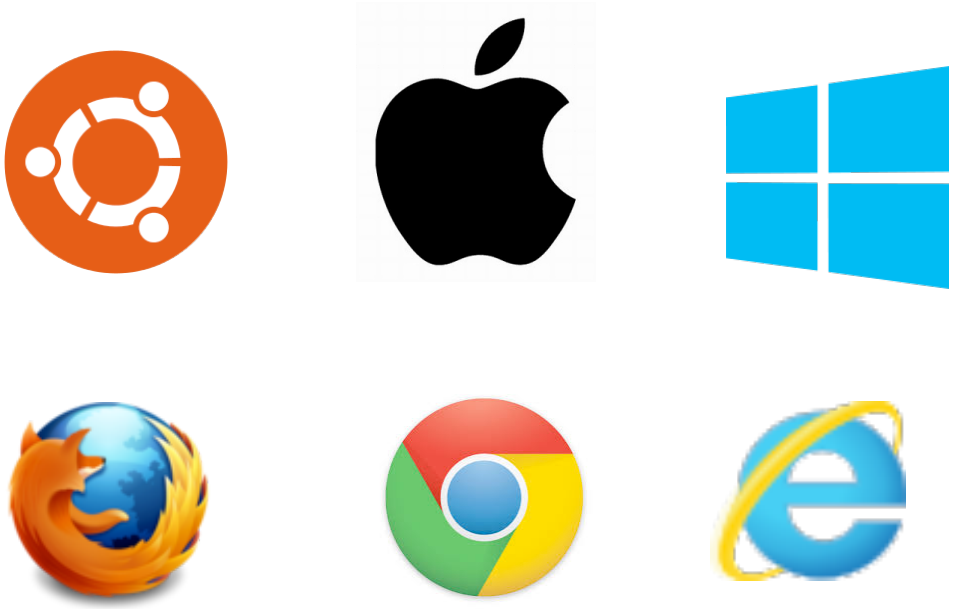
PDF, DjVu



ePUB, MOBI, AZW3

ODT, LaTeX

Flexibility of e-textbook use



Flexibility of e-textbook use

Open AGH e-textbooks

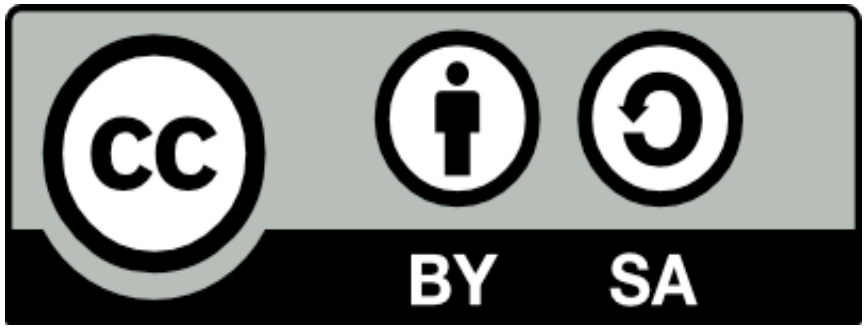
use published e-texbooks

adapt published e-textbooks

create your own e-textbooks

share (published/own) e-textbooks

Open academic e-textbooks



Creative Commons
Attribution - Share Alike 3.0 Poland

Benefits from CC BY-SA

adapted and modified e-textbooks will be always available for all users as well for the authors of the original works (AGH)

high quality resources are good starting point for adaptation = more open good quality resources availabale (CC -> SA)

constant up-to-date e-textbook according to AGH Curriculum

protection from use by commercial publishers

Metadata standards

Learning Resources Metadata Initiative
Dublin Core Metadata Initiative

OAI-PMH for sharing metadata with other universities‘ libraries (catalogue, digital libraries)

Open academic e-textbooks AGH

created by the AGH community
for the whole academic community

Open AGH e-textbooks - outcomes

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open soure platform for developing, publication and use

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open soure platform for developing, publication and use

open modules and e-textbooks + archive in Univ. Library catalogue

Open AGH e-textbooks - outcomes

open soure platform for developing, publication and use

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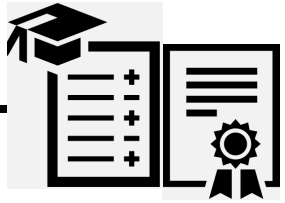
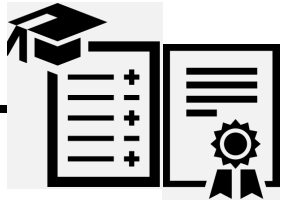


University Curriculum plug-in

Open AGH e-textbooks - outcomes

open soure platform for developing, publication and use

open modules and e-textbooks + archive in Univ. Library catalogue



University Curriculum plug-in

increase of IPR awareness among academic community

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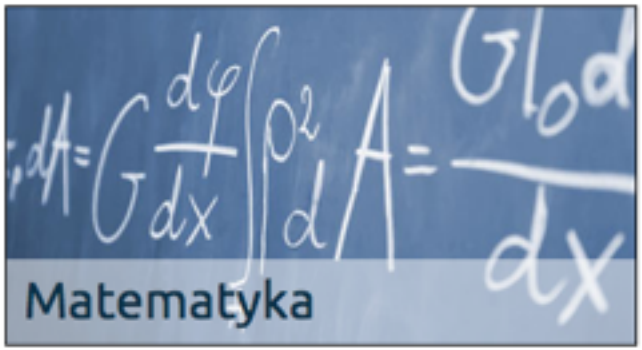
First pilot open e-textbooks - academic year 2014/2015



http://epodreczniki.open.agh.edu.pl
(early beta version)

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