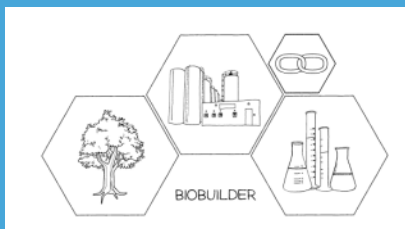




universiteit
▶▶ hasselt



BIOBUILDER® CREATE A BIOBASED VALUE CHAIN FROM A-TO-Z

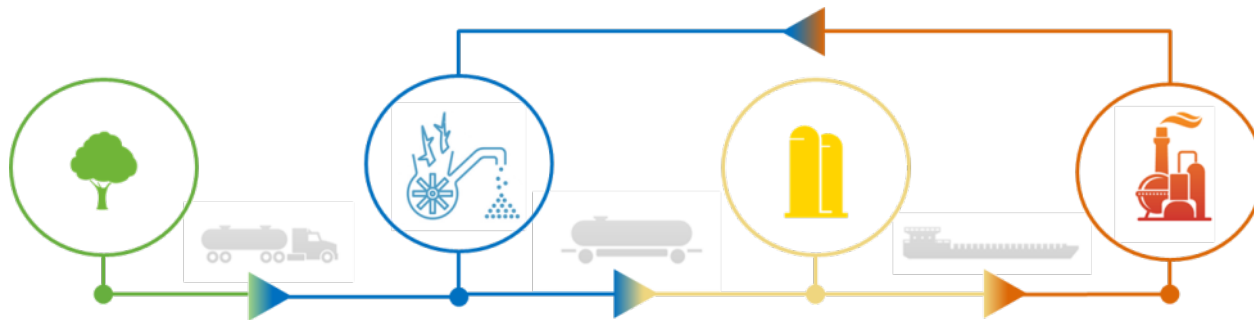
25TH EUBCE - STOCKHOLM (SWEDEN) - 15 JUNE 2017

RUBEN GUISSON - VITO
MIET VAN DAEL - VITO/UHASSELT

THE STORY BEHIND BIOBUILDER®

What our team does.

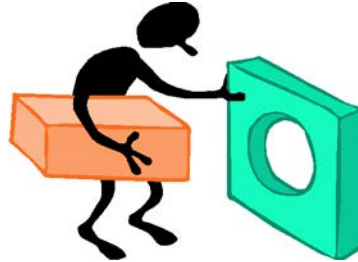
- » Our team stands for a **transition to a biobased economy** in which biomass is efficiently processed for chemistry, material and energy applications.
- » We combine **scientific research** on new biobased value chains with **consulting** for public and private customers.
- » As a methodology we provide **integrated biobased value chain assessments** addressing
 - » The **techno-economic** assessments
 - » The **mobilization** strategies.
 - » The **policy** aspects



THE STORY BEHIND BIOBUILDER®

Integrated biobased value chain assessments

Setting up new biobased value chains



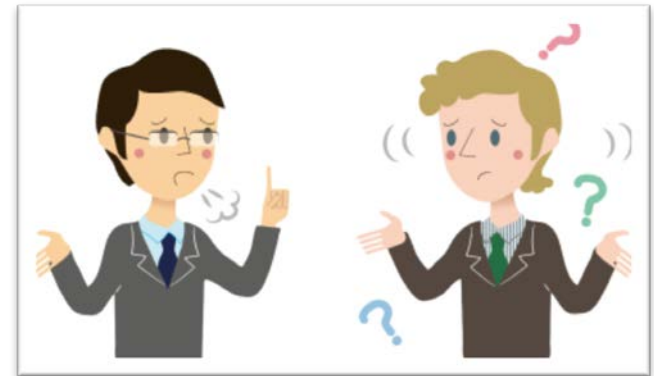
Biobased economy is complex.

- » **Interdisciplinary:** agriculture, forestry, research, education, industry, energy, environment,... (diff. responsible authorities)
- » **Multi-actor:** producer, consumer, investor, researcher, policy maker,...
- » **Multi-feedstock:** wood, grass, manure, straw, maize, organic residues,...
- » **Multi-product:** feed, food, materials, green chemicals, bioenergy,...
- » **Multi-topic:** economics, environment, technology, and society (diff. goals/ends or a combination)
- » **Multi-expertise:** high - medium - low (depending on topic/feedstock/product)

THE STORY BEHIND BIOBUILDER®

Uni-lateral stakeholder approach <> multi-lateral stakeholder approach
Multi-lateral discussion platform is not per definition a success formula

- » To build new biobased value chains - there are a lot of options/scenario's/...
- » You need to create understanding between stakeholders
- » You need to discuss a lot and you need to clarify things (hard to organise this in your head)
- » Discussions tend to 'run away'
- » Misunderstanding, confusions, drop-outs
- » Hard to keep focus & structure
- » Unclear results & decisions



THE STORY BEHIND BIOBUILDER®

We need a *Decision & Discussion support tool* in the development of new biobased value chains

» Some criteria to be fulfilled:



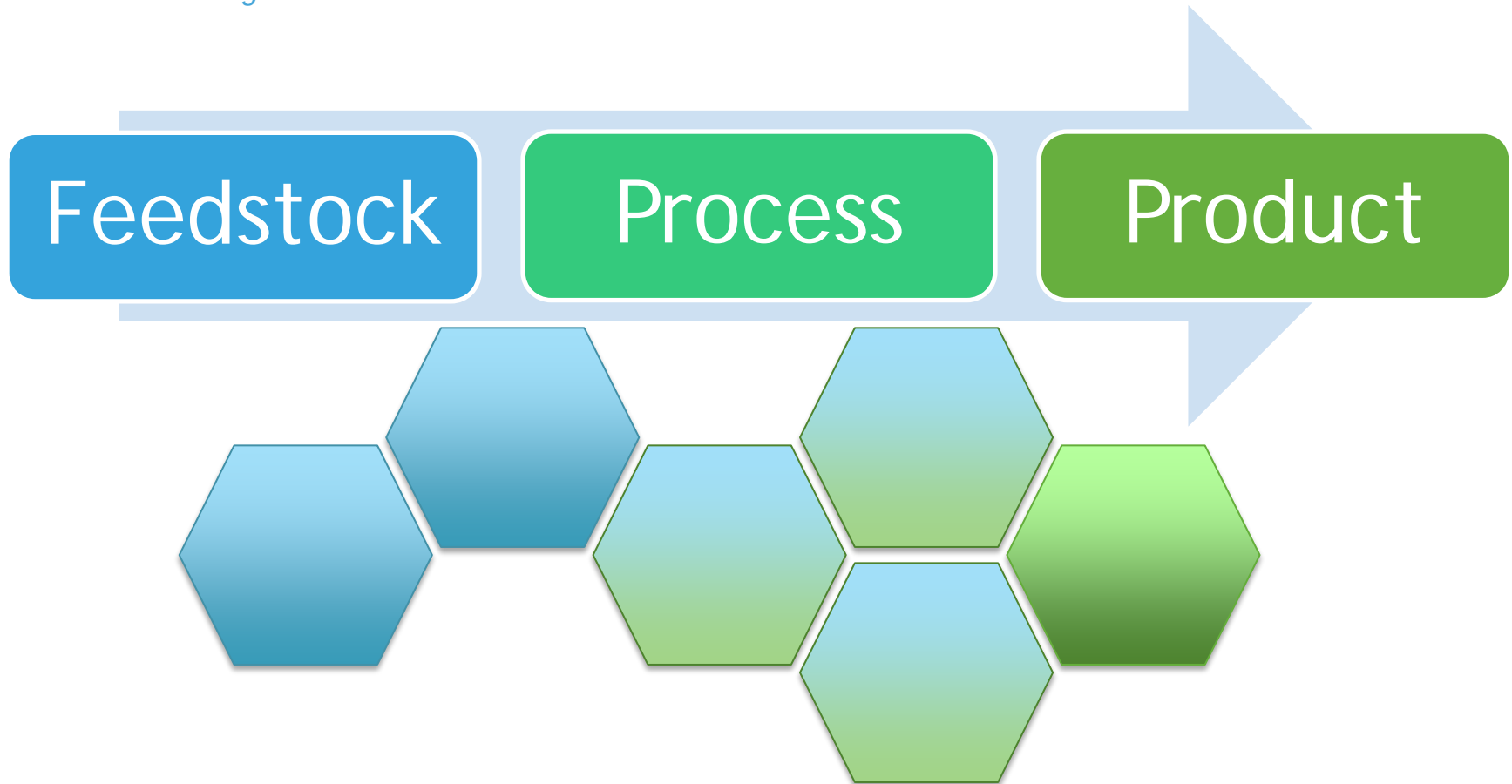
- » To bring together stakeholders (physically around the table)
- » To create interaction
- » To structure discussions
- » To gain new insights
- » To reduce complexity
- » To work result-driven
- » To be dynamic
- » Easy to apply - low entry threshold

NO
ROCKET
SCIENCE

A simple line drawing of a rocket ship, oriented vertically and pointing upwards. It has a pointed nose cone and a tail section with several small circles representing windows or engines.

BIOBUILDER® - WHAT WE CAME UP WITH

*Biobuilder is a set of wooden tiles - each representing a particular aspect of the bioeconomy
To be linked together to new value chains*



BIOBUILDER® - THE PRODUCT



BIOBUILDER® - IN PRACTICE

In the beginning there was...



BIOBUILDER® - IN PRACTICE

*Biomass needs to get around...
Mobilisation/logistics*



BIOBUILDER® - IN PRACTICE

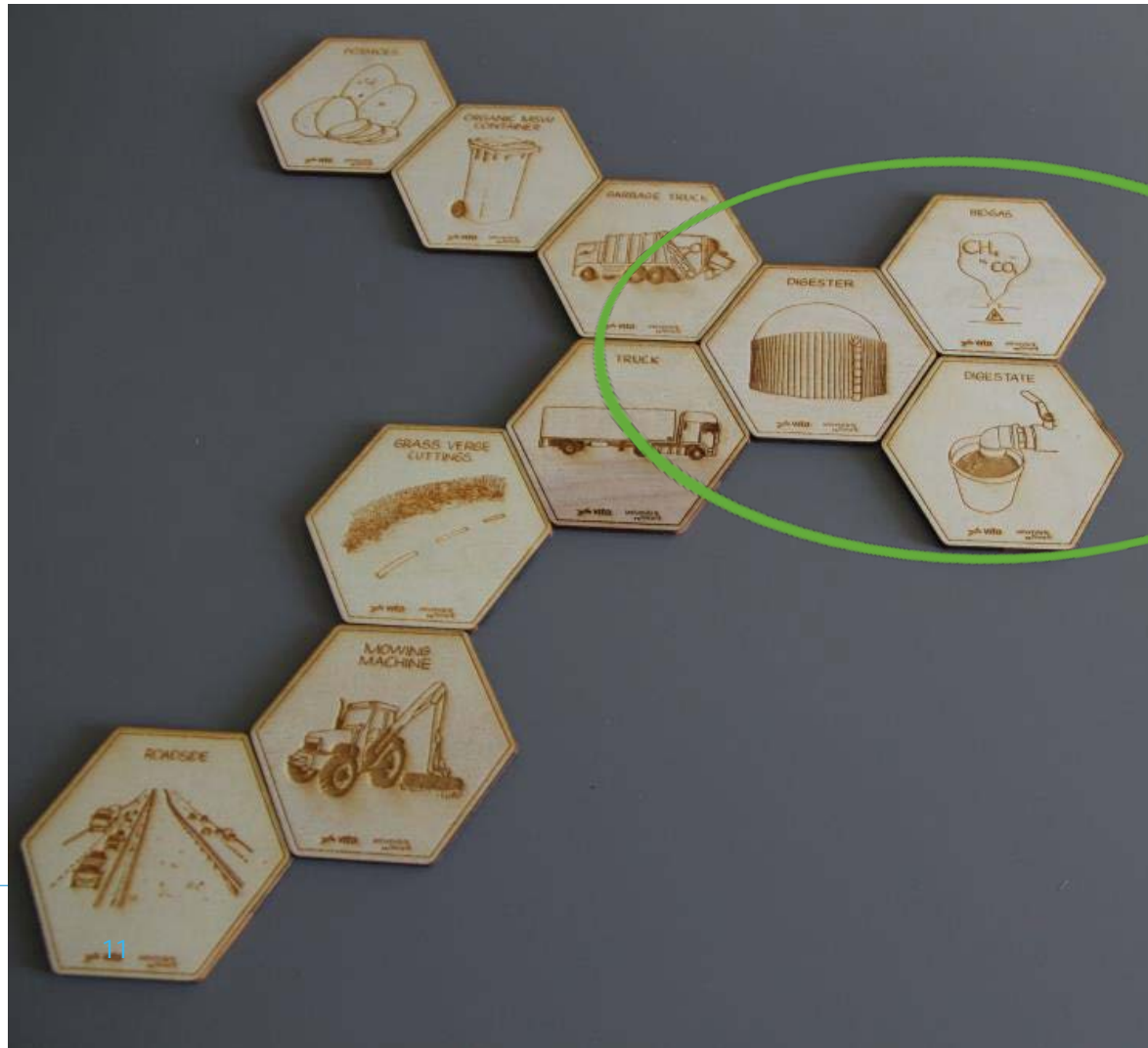
A business as usual practice...



BIOBUILDER® - IN PRACTICE

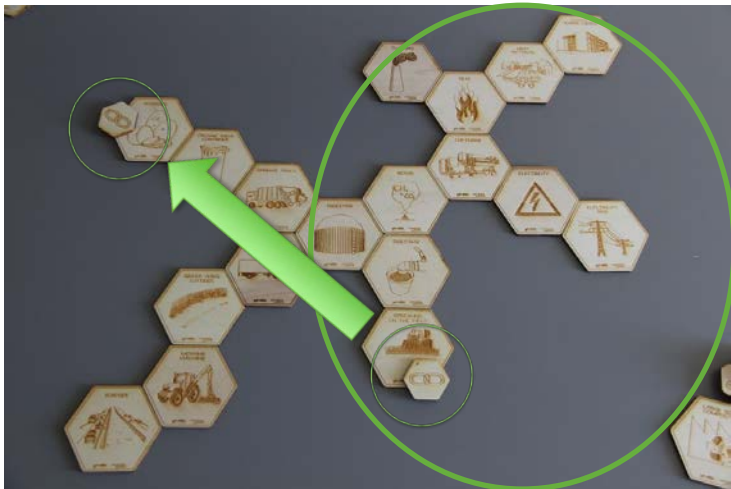
Away with those tiles...

Let's move in a slightly more innovative technology...



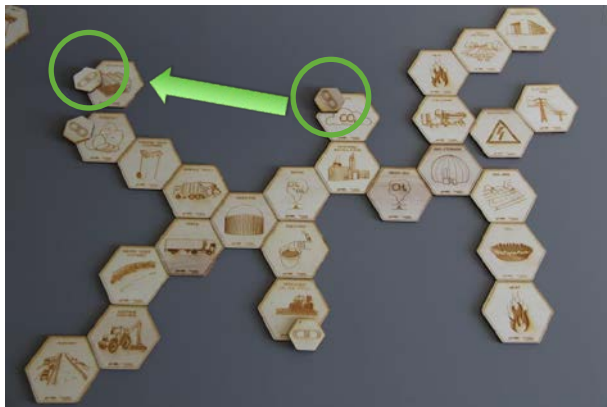
BIOBUILDER® - IN PRACTICE

*What to do with the products...
Circular linking possibilities out there?*



BIOBUILDER® - IN PRACTICE

Are there other technology options...
Let's plug in an additional technology
Let's link CO2



BIOBUILDER® - IN PRACTICE

From by-products to new green chemicals...

*A lot of scenario's to be explored & explained
Hard to keep track of that in your head - in a
verbal discussion*



BIOBUILDER® - WHAT'S IN THE BOX

Dutch/English version available

- +100 wooden tiles
- Black tiles - crayon
- Linking tiles
- Priority chips

pyrolysis

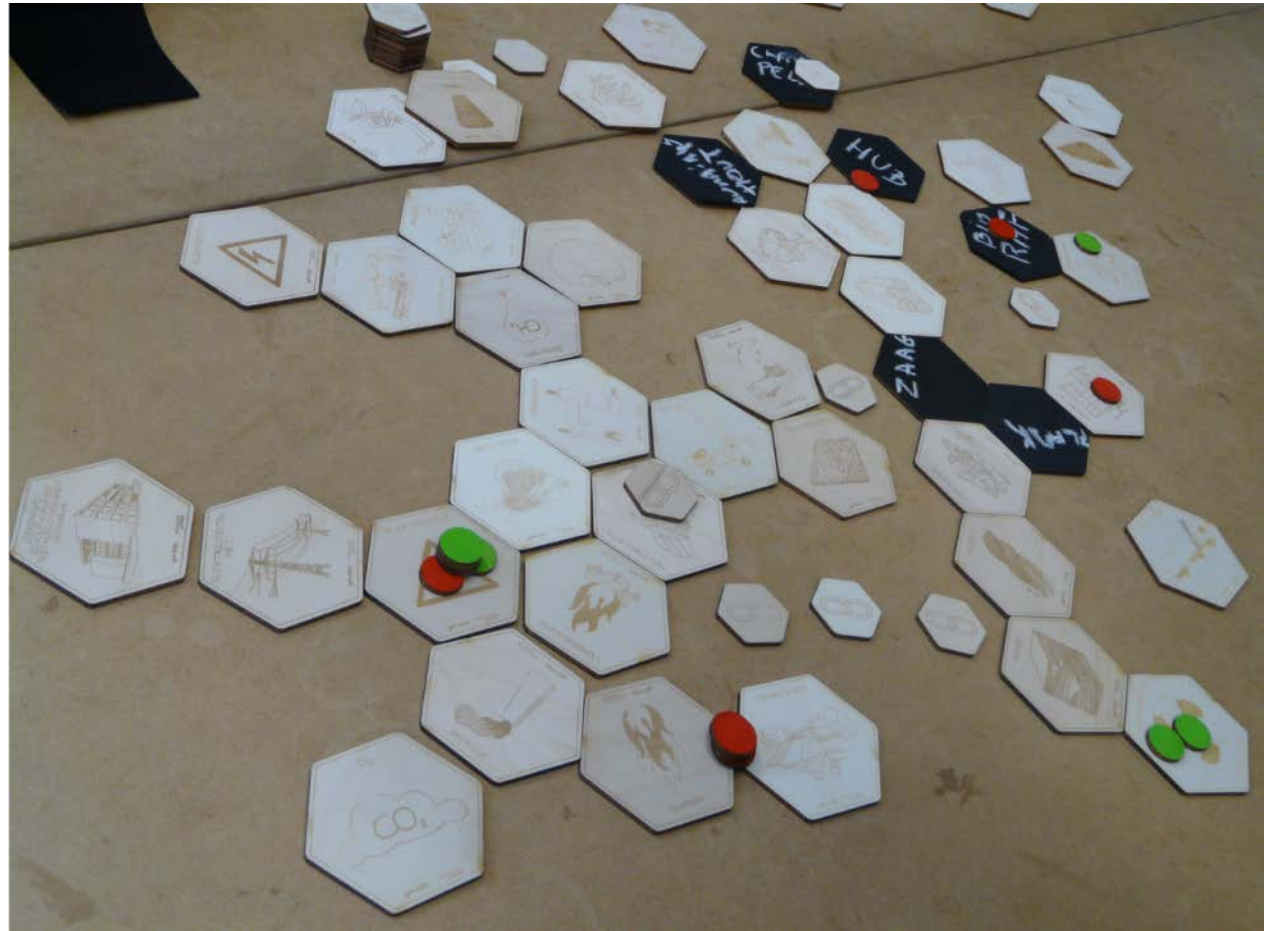
digestion

composting

algae

gasification

biorefinery



BIOBUILDER® - CLIENTS/CUSTOMERS

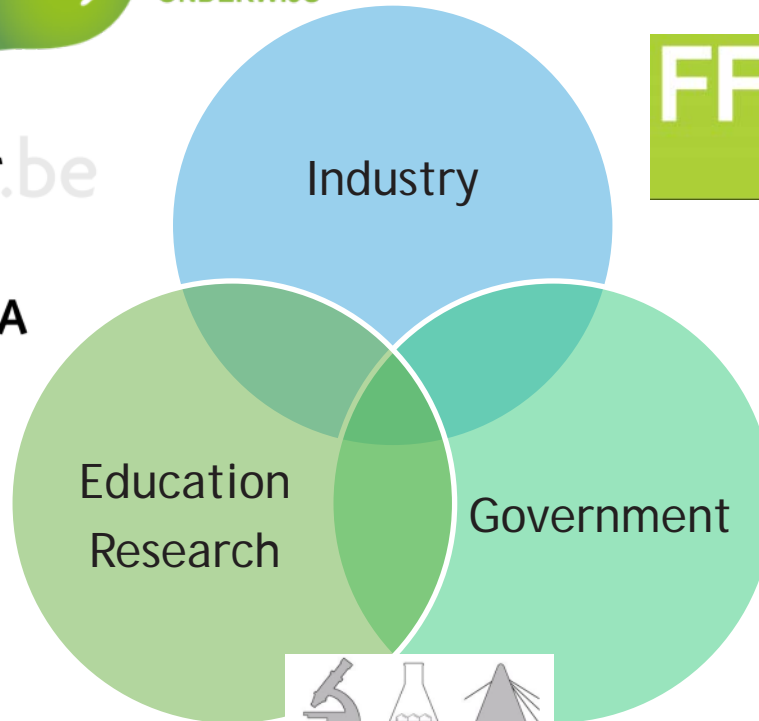


25TH EDITION
EUBCE 2017
European Biomass Conference & Exhibition

12-15
JUNE | STOCKHOLM
SWEDEN
Stockholmsmässan



biomasspolicies



BIOBUILDER® - FURTHER DEVELOPMENTS

Interreg Project: Biobased Education without Boundaries/Grenzeloos Biogebaseerd Onderwijs



- » Flanders and the Netherlands are at the forefront of the biobased economy.
- » There will be a need for sufficient and well-qualified professionals to further develop the biobased economy
- » Which are the training and educational needs to comply with these future demands for biobased competences

- » Biobuilder® as a training and educational tool.
 - » Next steps for improvements as an educational tool within biobased courses
 - » First line of thought - digitalisation/App-development/media/movie

BIOBUILDER® - OPERATING OPTIONS

So how can we help you?



Train the trainer



Host@Workshops



Lincense4Use



Customize new decks

BIOBUILDER® - CONCLUSIONS

Decision & Discussion support tool in development of new biobased value chains

Structure discussion and make them insightful (also for not experts)

- » BIOBUILDER® is a means for decision/discussion support - not a goal as such
- » Background expertise is needed to facilitate the use of the tool
- » Easy deployable - simple - self-explanatory - hands-on <> no extensive training or introduction
- » Application is demand driven (political, economic, environment, technical, environmental,...)
 - » Strategy discussion, project idea brainstorming between partners, clarification for workers,...
- » Stakeholders/Agents in the value chain get a look beyond their business/role
- » Adaptable to the knowledge level of the participants
- » Very dynamic & interactive
- » Very positive feedback

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BIOBUILDER®
CREATE A BIO BASED VALUE CHAIN FROM A TO Z

CLARIFY THE COMPLEXITY OF THE BIO ECONOMY

A bio economy not only includes everything needed to produce biomass. It also deals with the way biomass and its residues are subsequently used. This is very complex. Furthermore, an integrated chain approach is very important in a bio economy, and cascading and resource efficiency take a central place. When discussing biomass challenges, it is often hard to keep focus and structure. This often results in the lack of clear results and decision. Therefore VITO and Hasselt University have designed BIOBUILDER®.

A USEFUL TOOL TO CREATE BIO VALUE CHAINS

BIOBUILDER® is useful for organisations seeking to develop bio based value chains. Specifically, it is a set of tiles, each representing a particular aspect of the bio economy. All aspects are covered, ranging from biomass production and transport to processing and waste products. Under the guidance of experts from VITO and the University of Hasselt, participants work with the tiles in order to develop new value chains. BIOBUILDER® facilitates the exchange of ideas in an interactive and dynamic way, starting from a specific defined problem or challenge.

BIOBUILDER® brings clarity. It gets constructive discussions going and makes bio value chains insightful. It helps to focus on the initial problem. Besides, using BIOBUILDER®, customers can pinpoint the strengths and weaknesses of a value chain within the bio economy, at a political, economic, technical and environmental level.

EASILY DEPLOYABLE FOR A VARIETY OF PURPOSES

BIOBUILDER® is useful for many purposes. For decision-making processes, to feed discussions, to gain insights and for educational purposes. The simplicity of the tool makes it possible to work tailored for each customer demand. Because BIOBUILDER® is very intuitive, it does not require extensive training or introduction.

WHAT?

Simple tool which helps organisations and companies to create bio based value chains under the supervision of experts. These value chains include all relevant aspects of a specific bio economy.

WHY?

- » To bring together stakeholders
- » To structure discussions
- » To gain new insights
- » To reduce complexity
- » To work result-driven
- » Easy to apply

WANT TO KNOW MORE?

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