



# GO-GRASS

Grass-based circular business models  
for rural agri-food value chains

## Innovative value chains (WP6)

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# Questions

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**What are the key drivers to the development of demo value chains?**

**How can the demo value chains learn from each other?**

Value chain approach offers

- Holistic, whole-system perspective
- Opportunities for cross-fertilisation
- Communication/ stakeholder engagement tool





# Progress in the workpackage

GO-GRASS

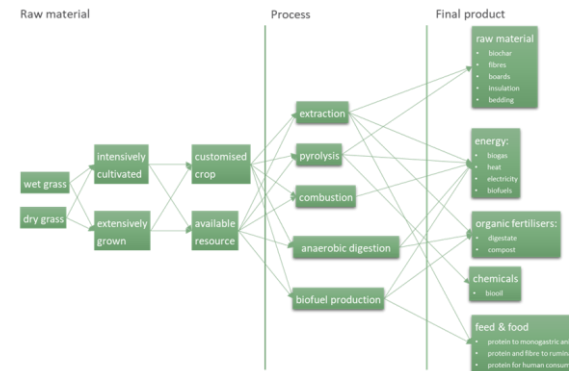
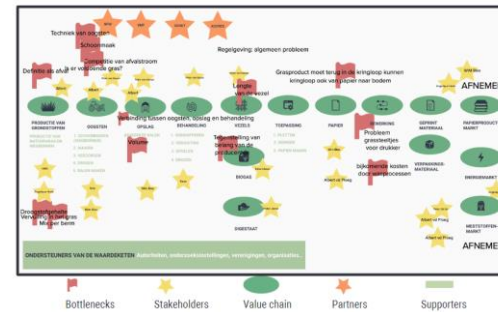
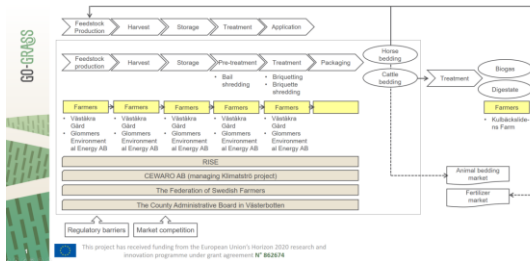
Analysis of demo VCs

Validation & update

“Shuffling”

Decision support tool

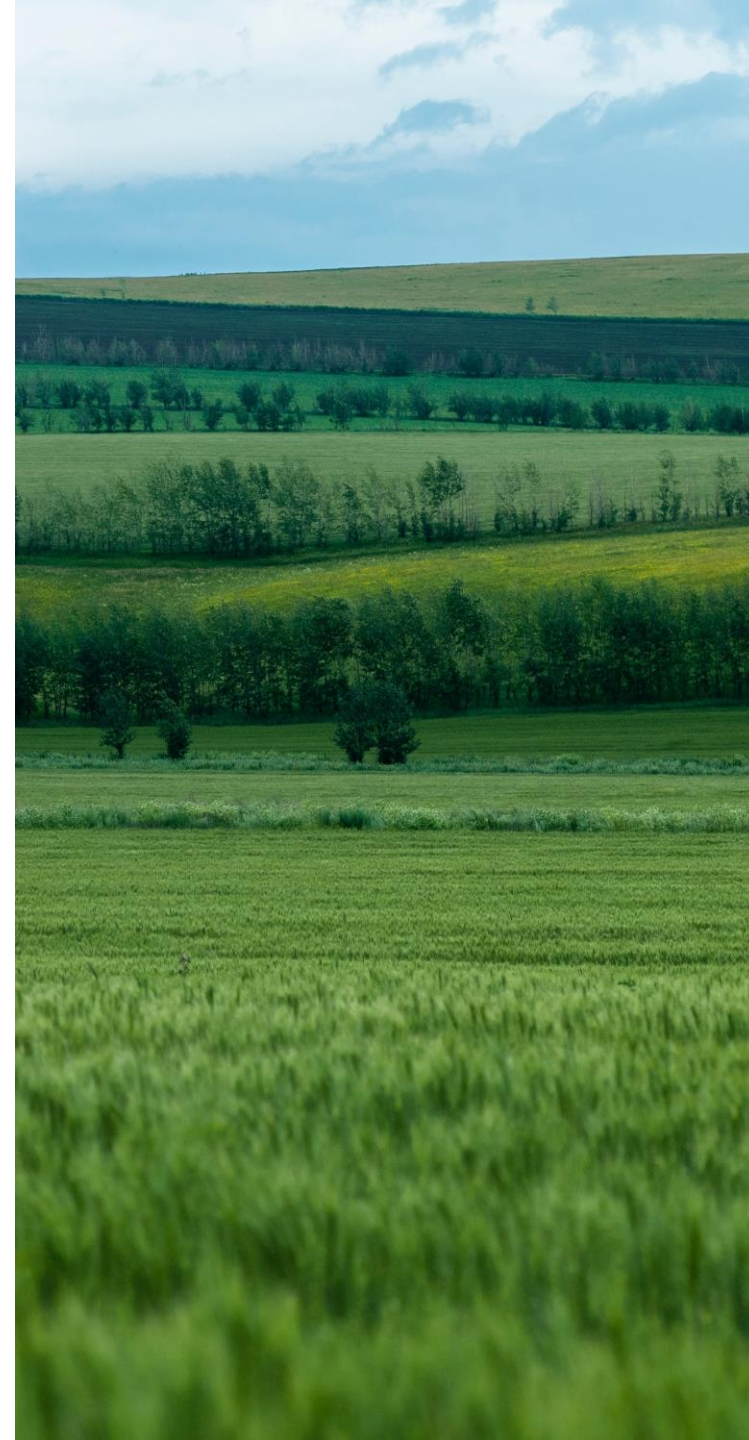
## Value chain sketch – Swedish DEMO





# Key drivers to the VC development: lessons learned

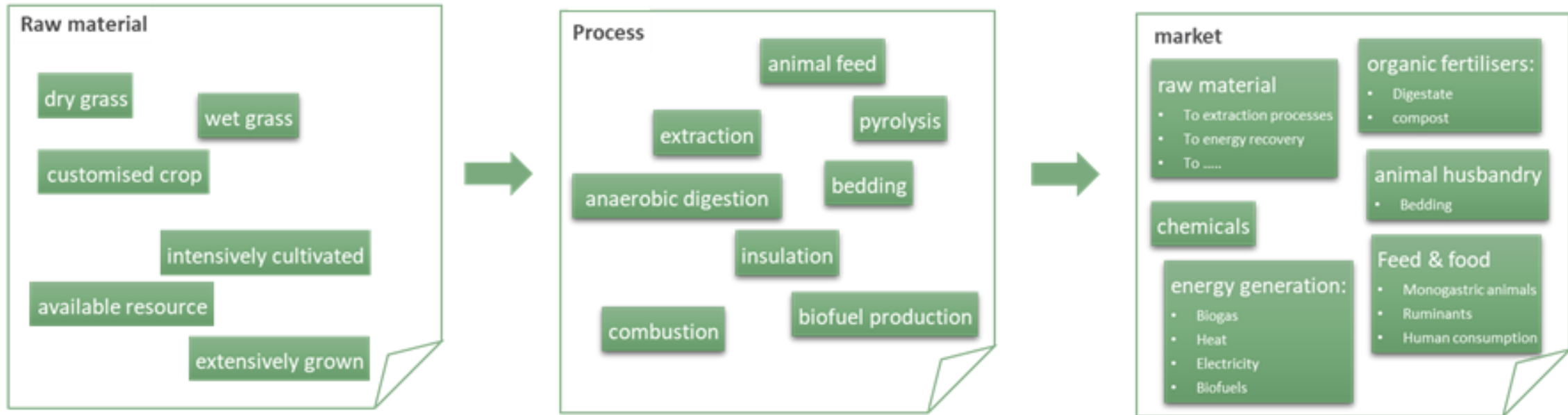
- Strong **demand** side pull/ **market opportunities**
  - **Common understanding** about the visions & opportunities
  - **Trust** among the value chain actors
  - Advancement in/ demonstration of **key technology**
  - (Tangible) **communication** with value chain actors
  - Innovative **coordination model**
  - **Collaborative learning** to enhance compatibility between VC components
- ... in the “main” demo value chain as well as side-stream chains





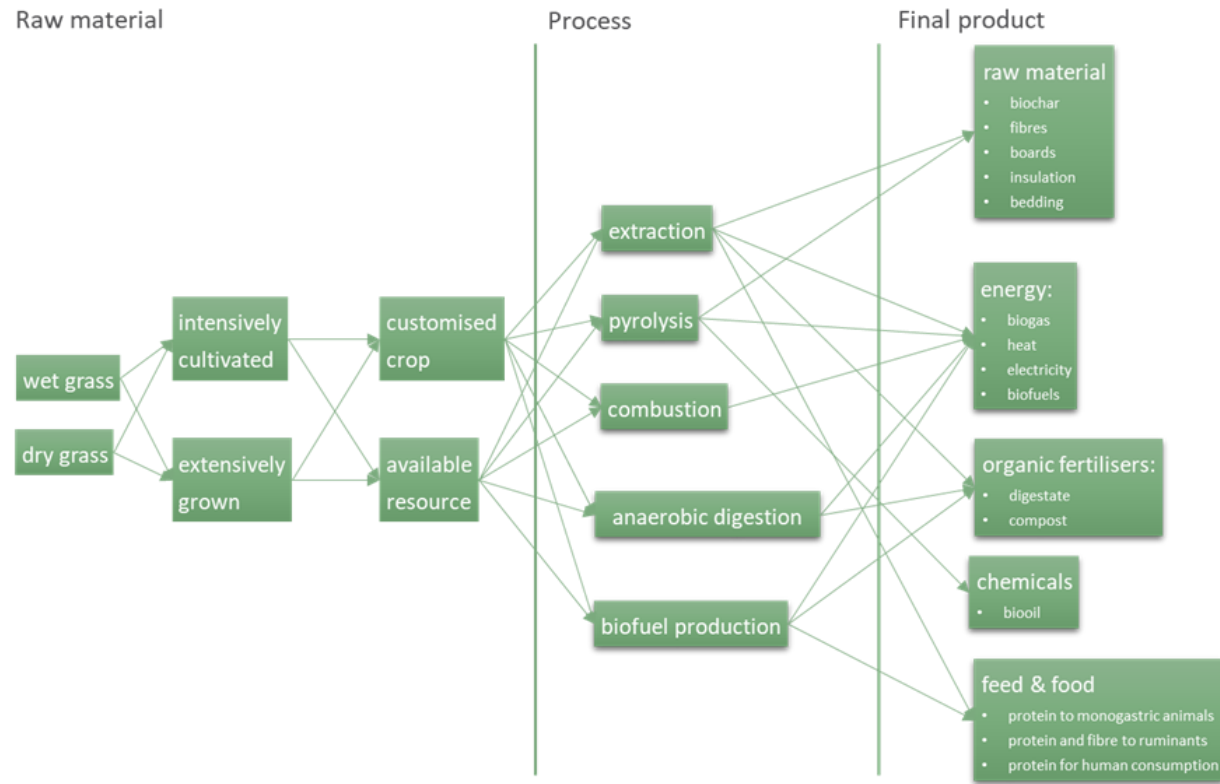
# Development of integrated VCs

Can the demo value chains optimized by learning and adopting from each other?

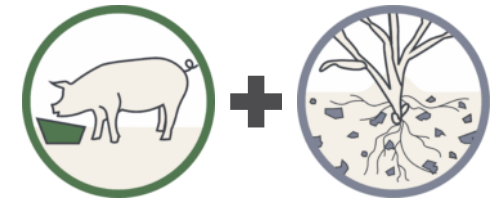




# Development of “integrated” VCs



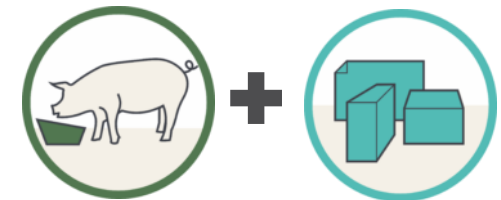
Economic, social and environmental impact assessment (WP4)



Protein & biochar



Paper & biochar



Protein & paper

Reference: Baky et al, 2022 - D6.3



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement N° 862674



# The decision support tool

GO-GRASS



## WELCOME TO GO-GRASS EVALUATION TOOL!

### EVALUATE THE VIABILITY OF YOUR GRASS-BASED PROJECT

GO-GRASS support tool is designed for evaluating the feasibility and potential of your grass-related projects. Whether you're an agricultural enthusiast, a business owner, or a researcher, our intuitive assessment tool provides valuable insights and recommendations to help you make informed decisions.

### HOW IT WORKS



#### SELECT YOUR PRODUCTS

Tell us the product you aim to produce from the chosen grass. This will help us tailor our questions and assessment to your goals.



#### ANSWER QUESTIONS

You'll be guided through a series of questions in the following five categories: 1)Biomass Production, 2)Transportations-Storage-Logistics, 3) Pretreatment and Processing, 4)Distribution and Logistics, 5)Market



#### RESULTS

After you've answered all the questions, we will provide you with a viability assessment - "GO" or "NO GO" - for your scenario and customized recommendations based on your responses.



Unleash Your Grass Project's  
Potential Now!

LET'S BEGIN

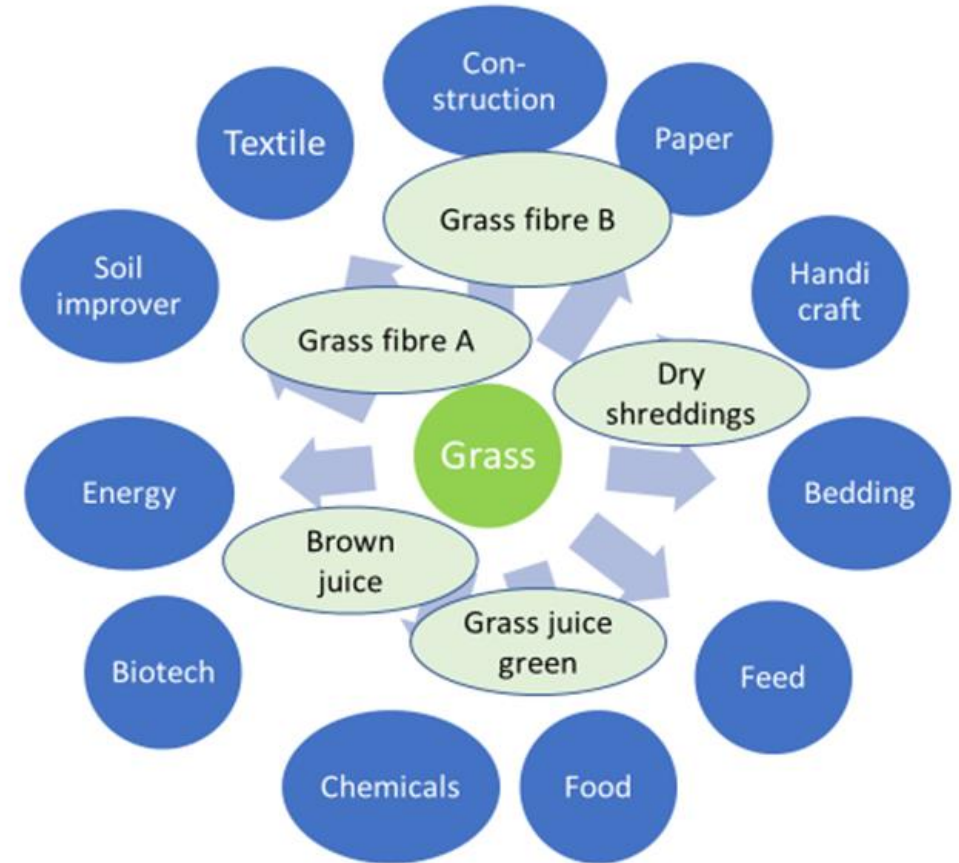




# Many opportunities for innovative value chains from grass

Innovation potentials from

- Processing of side streams
- Use of new technology
- Organisation of suppliers
- Organisation of processing entities
- Targeting new markets







# GO-GRASS

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# Agenda

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- Components in the Demo value chains
- Flexible integration of components
- Examples of innovative value chains
- Optimal value chains





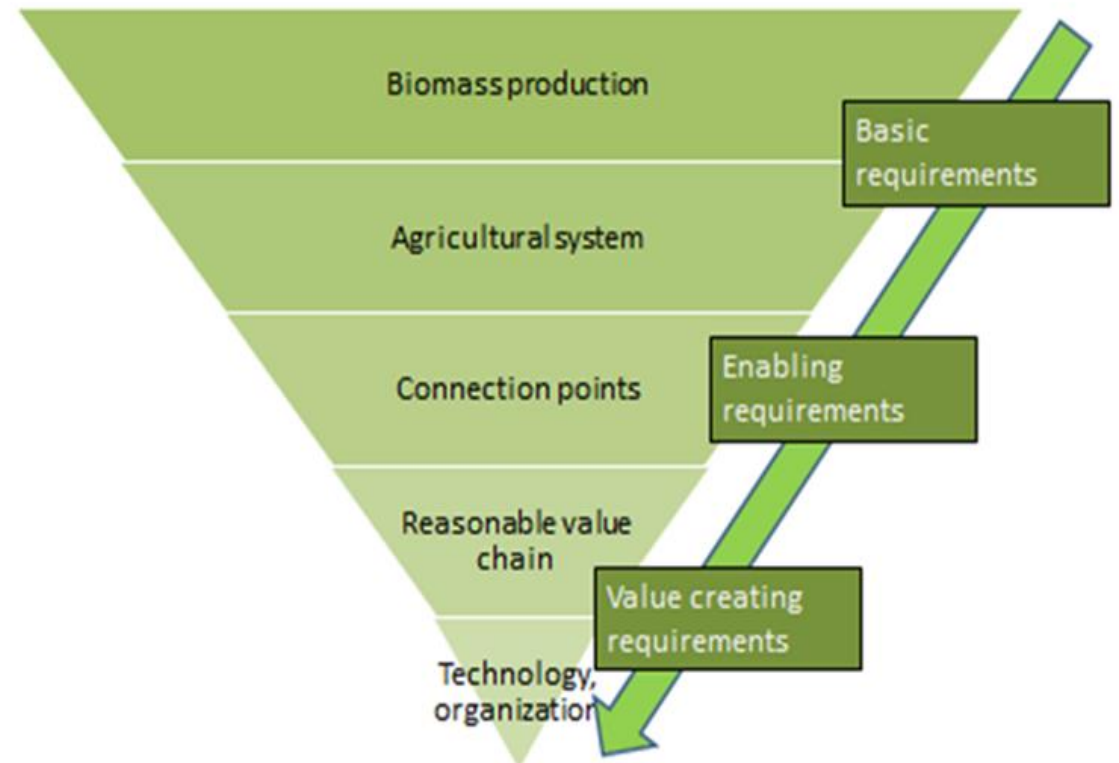
# Biomass valorisation motivate new value chains

Key driver: Best possible exploitation of the biomass to underpin feasibility of the Demo system through:

- New or better use of feedstock (grass)
- Production of new products
- Valorisation of side streams

Technology enables processing;

Connection points enable market access





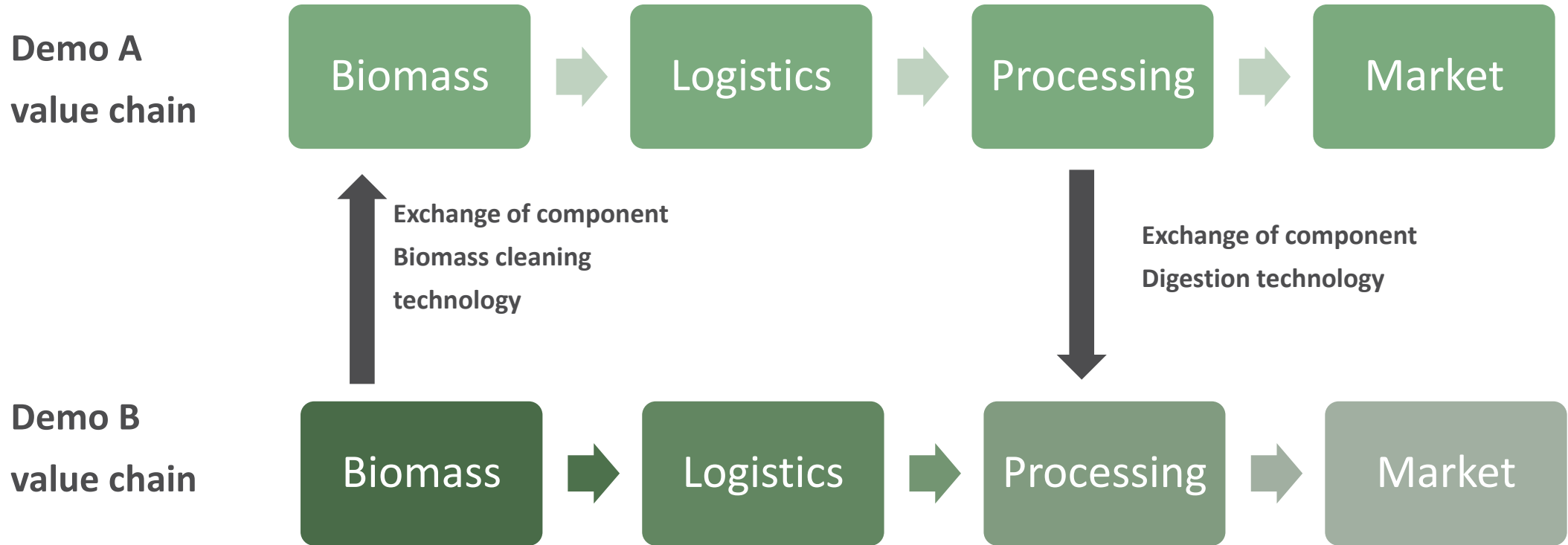
# Flexible integration of components enable innovative value chains

See idea for graph on next slide.





# Graph to show flexible integration between 2 value chains





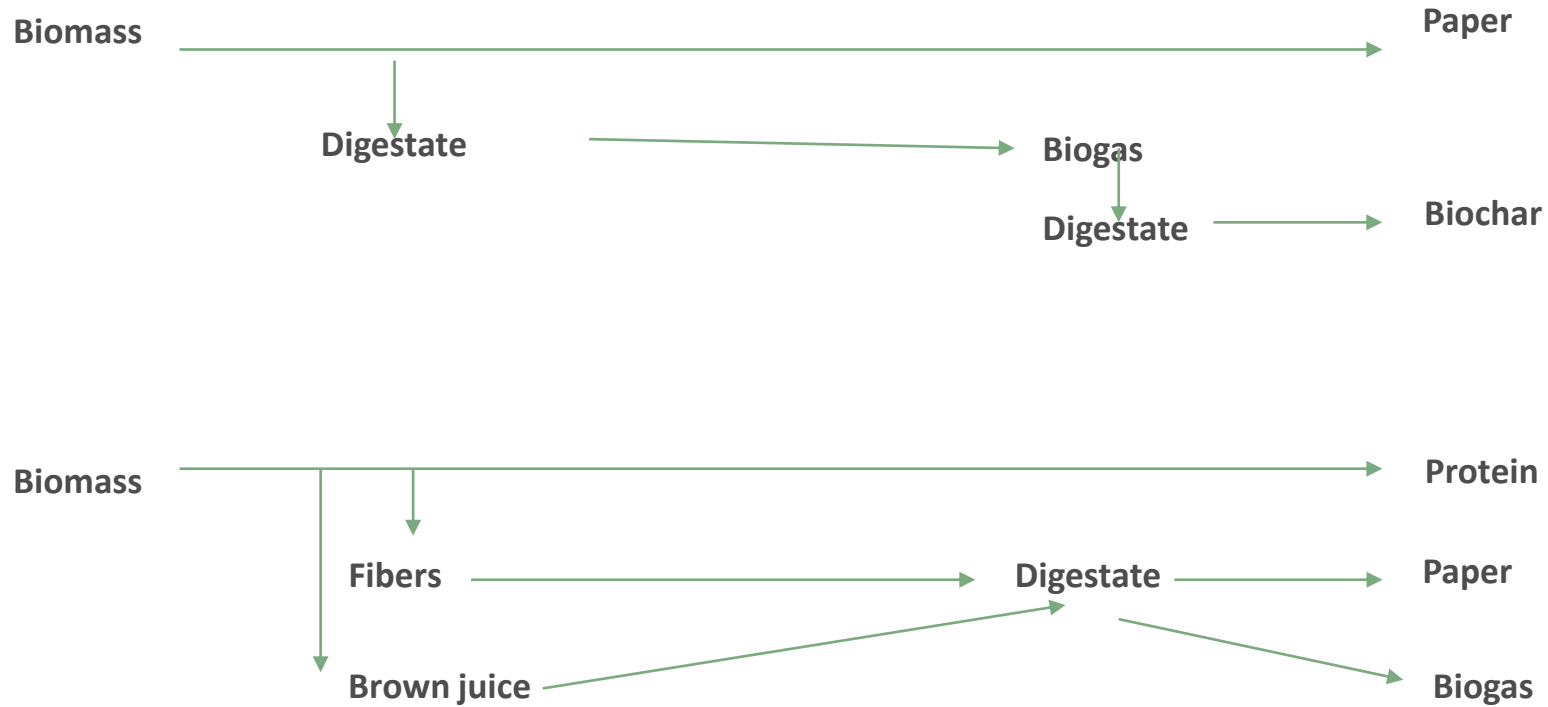
# Biomass valorisation motivate new value chains

- Different development progress
- Different level of technology development
- Different level of collaboration
  
- Novel use of grass biomass → uncertainty
- Grass providers have to deal with some changes





# Graph innovative value chains Hyunjin, please check pages 24-27 in D6.3





# Optimal innovative value chains

New value chains that are optimised according to the economic, social and environmental impact

Value chain A: Integration of protein production with biochar production

Value chain C: Integration of paper production with production of biogas and biochar

Value chain B: Integration of protein production with paper and biogas production

Hyunjin: pages 24-27 in D6.3







# Compatibility of the VC components



Economic

- Raw material price
- Final product price
- Investment cost
- Operating cost



Infrastructural

- Appropriate type/scale of infrastructure



Technical

- Match between
- Biomass characteristics and processing technology
  - Harvesting and processing technology



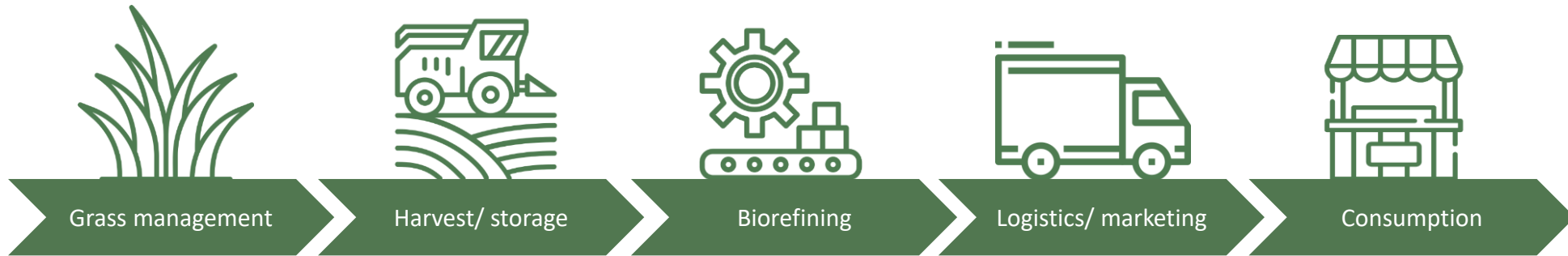
Organisational

- Appropriate type/scale of infrastructure





# Compatibility of the VC components

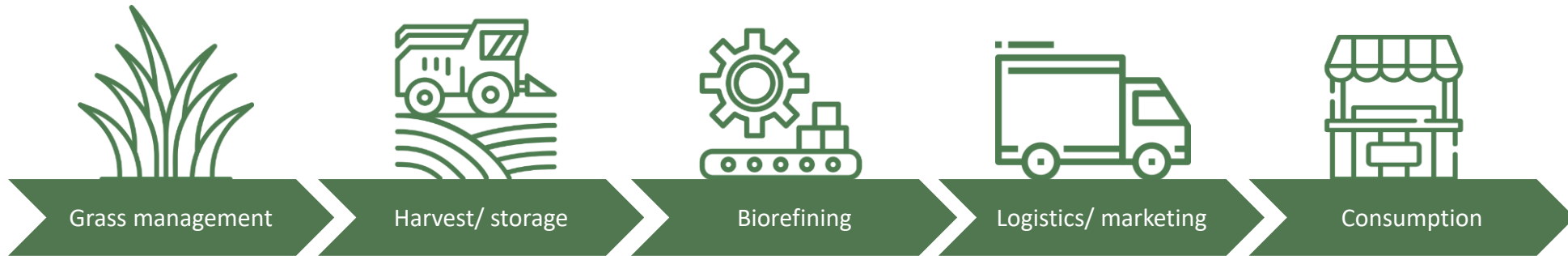


- Economic: raw material/ final product price, investment cost, operating cost
- Technical: match between biomass characteristics, harvesting technology and processing technology
- Infrastructural: appropriate type and scale of infrastructure
- Organisational: coordination of process e.g., biomass collection





# Key drivers to the demo VC development: compatibility of the VC components

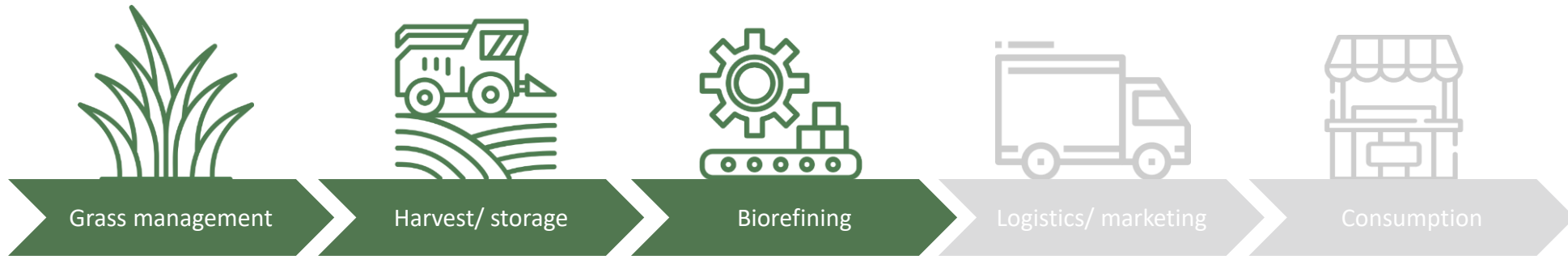


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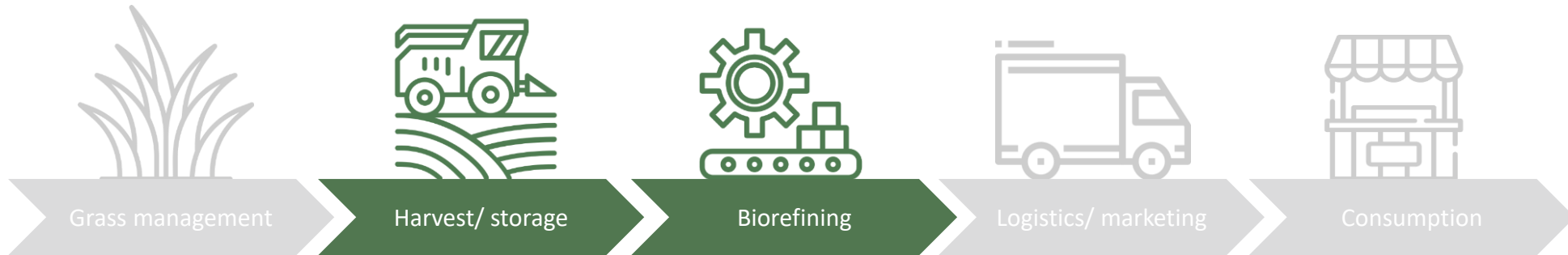


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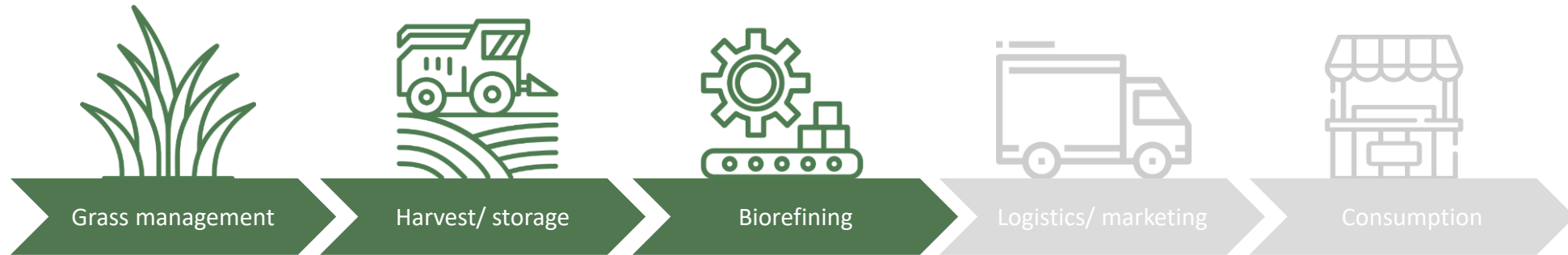


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