
The Green Economy

capitalizing on green gold

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The Green Economy

capitalizing on green gold

The Green economy...

... an economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities...

Capitalizing on Green Gold...

...efficient and effective use of biomass.

Global challenges

Food security



Climate change



Agro-food



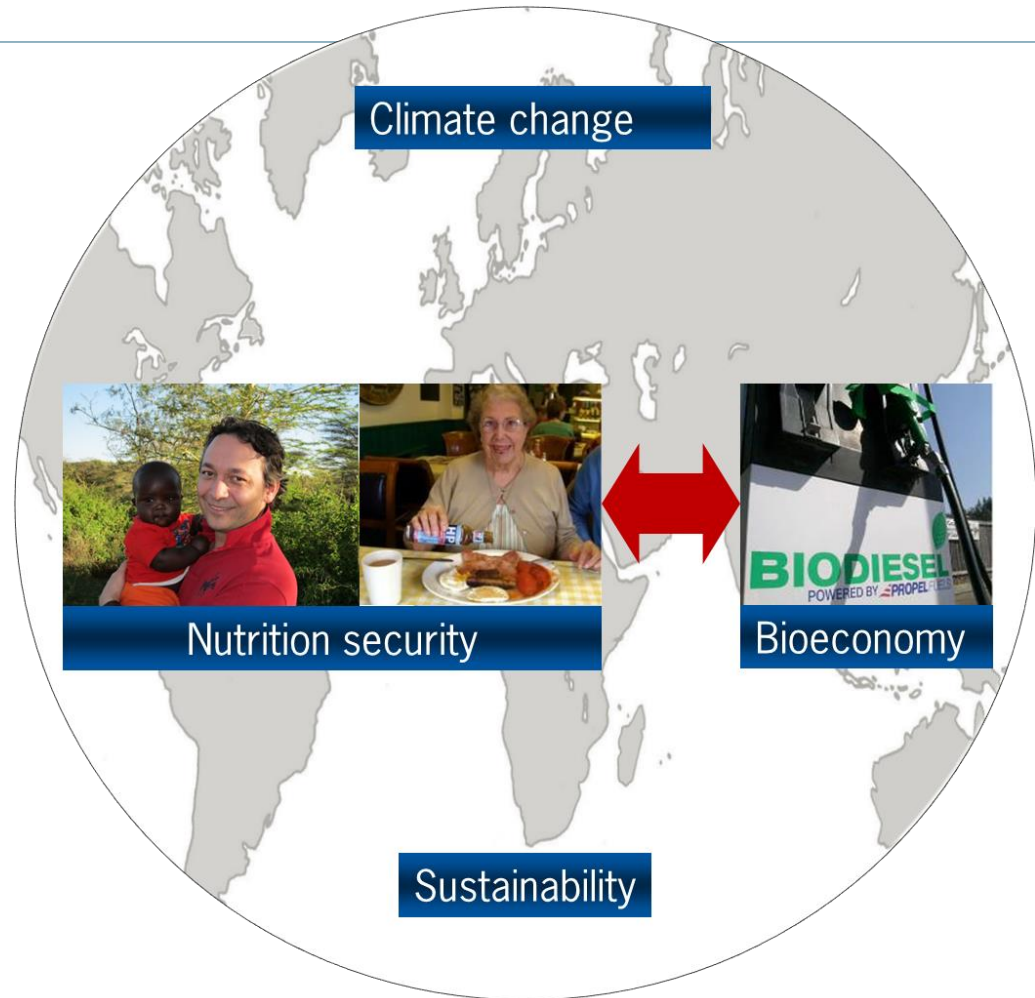
Stewardship

Food and health



Bioeconomy

Global challenges



The Bio-economy

The Biobased economy builds on renewable biomass rather than on fossil fuels

The Biobased economy opens new exciting possibilities for sustainable economic development

The Biobased economy threatens food security

... How can we capitalize on the Biobased Economy without jeopardizing food security...

Bio-fuel



Food for energy
Plant oil, maize for ethanol, sugar for ethanol

Risk for direct competition with food
First generation

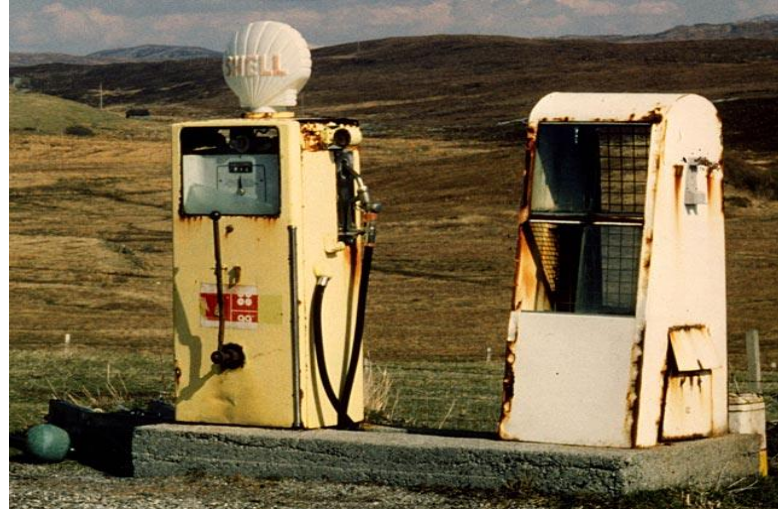
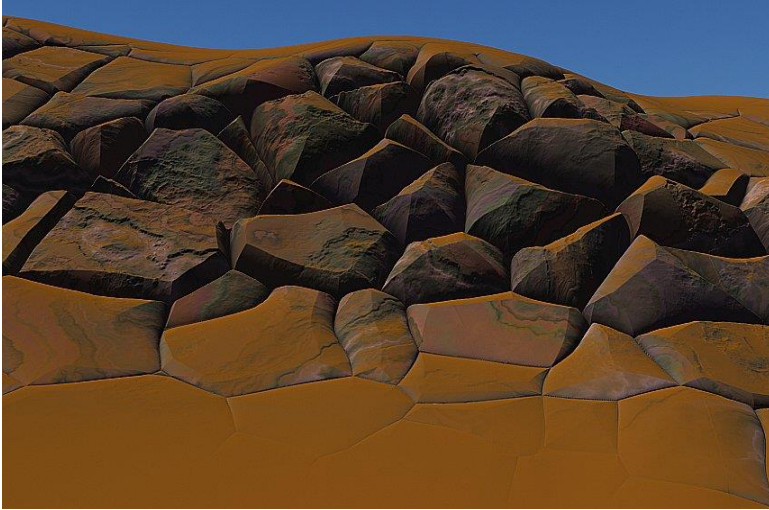


Wood for energy
Woody components for ethanol or biodiesel

Risk for indirect competition with food

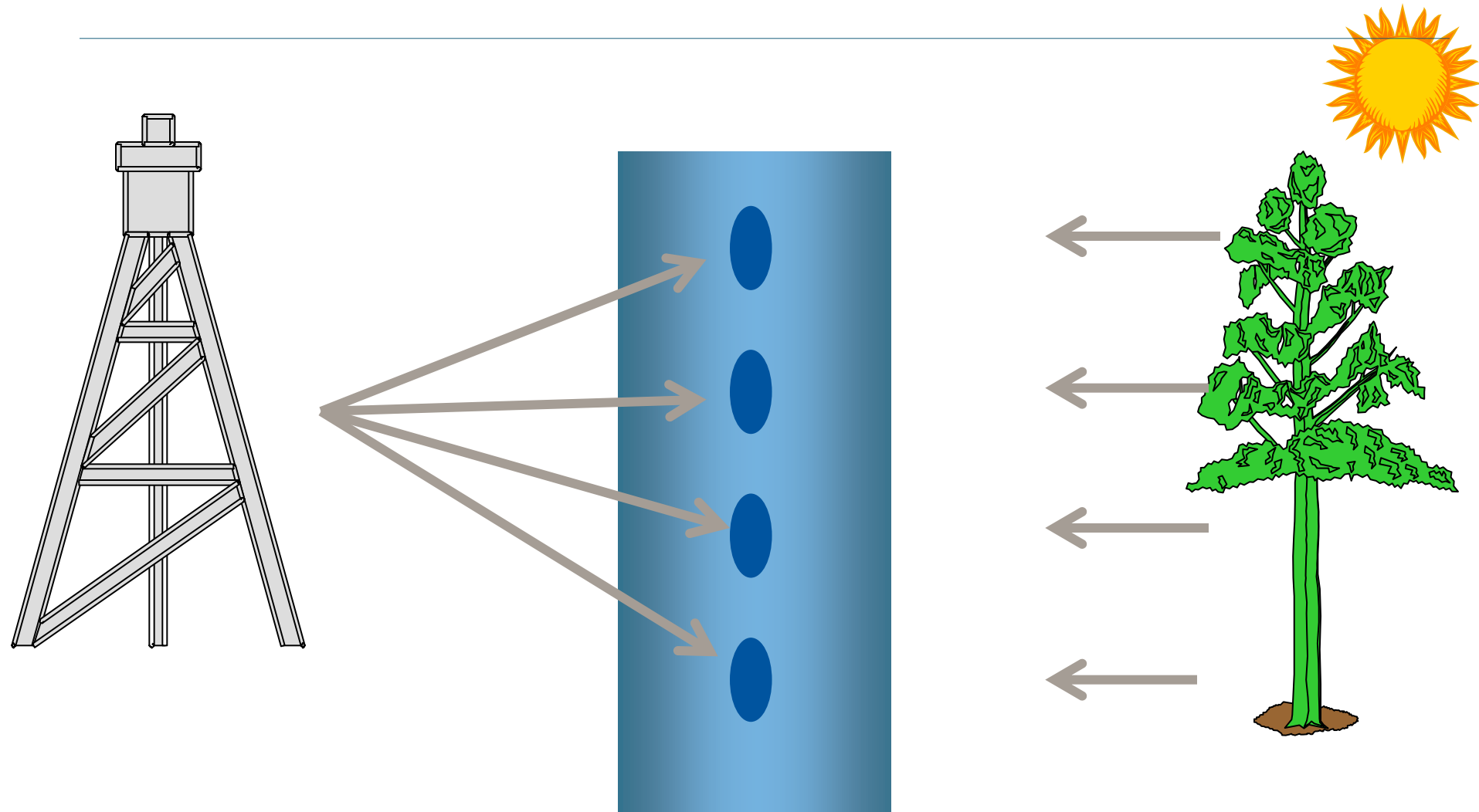
Second generation

The challenge of the bioeconomy



...The stone age did not end because we ran out of stones...

Materials from Biomass and Oil

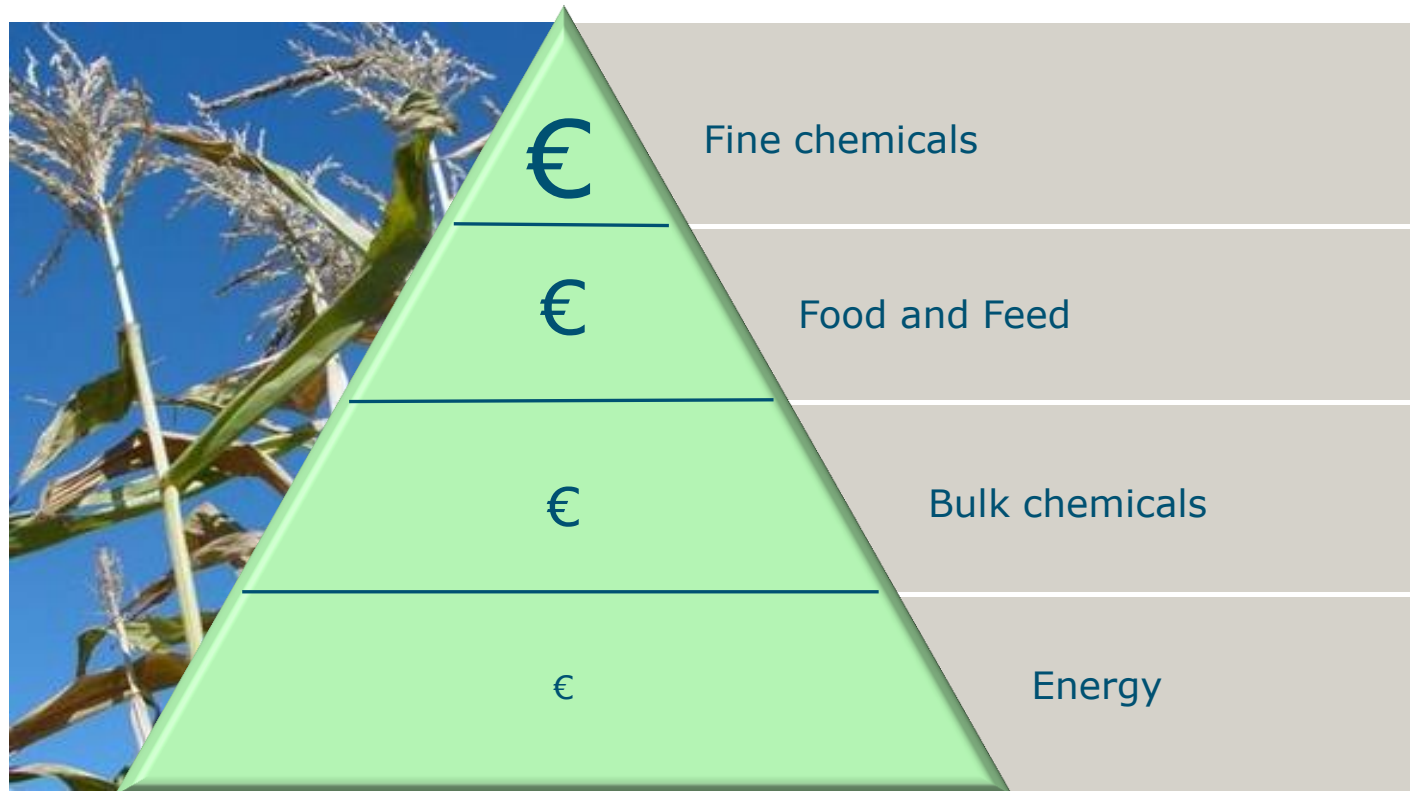


Materials

Capitalizing on green gold: Biorefinery



Biorefinery: the value pyramid




Green Gold... Biorefinery



Bioeconomy

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By : Ikhwan Abdillah (School of Life Sciences and Technology)

Indonesia has a huge number of cellulose resources. That cellulose is raw materials for lactic acid production. Nowadays almost industrial applications need the lactic acid. Imagine it, if we can maximize all the cellulose resources that can be found from organic waste from Sabang until Merauke, Indonesia can awake their giant within of economical power by lactic acid-based industrial applications. Imagine it, just from the "organic waste capital."

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The basics of innovation

leap

Technological



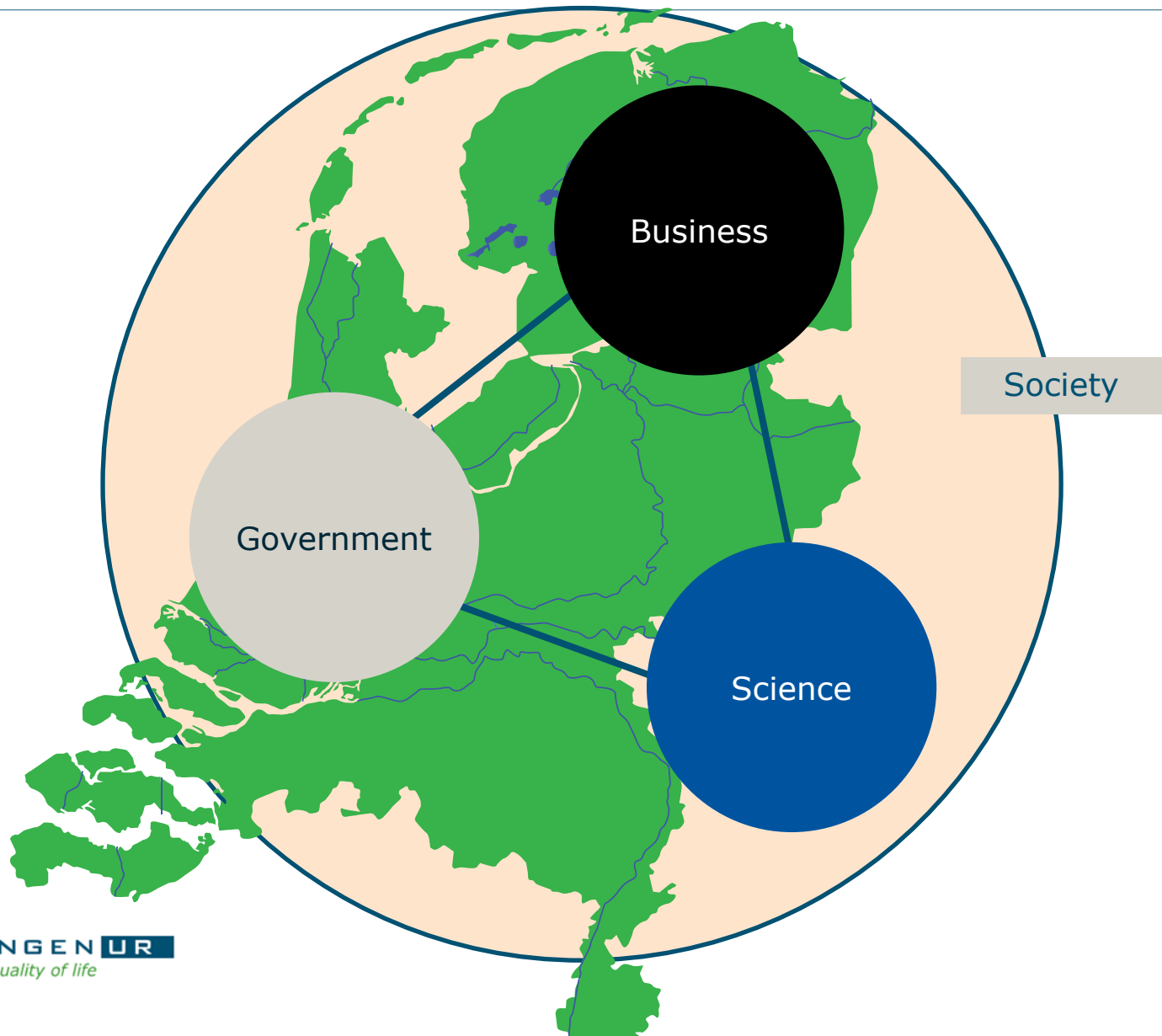
incremental

leap

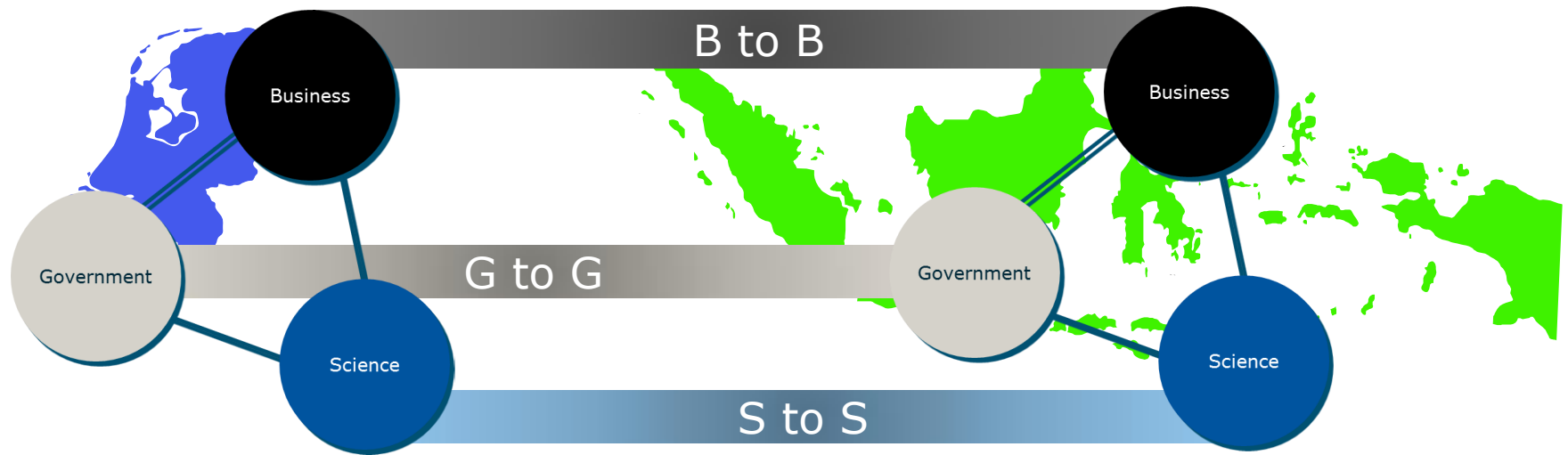
Socio-economic



The Golden Triangle



International collaboration



Agriculture Beyond Food

- RISTEK, DIKTI, IPB, ITB, Gadjah Mada, UI
- KNAW, WOTRO, Universities of Wageningen, Leiden, Utrecht, Groningen



Terima Kasih



*...To explore the potential of nature,
to improve the quality of life...*