

Setting up and building learning communities
for the transition to a biobased and circular economy

Annemieke van Barneveld-Biesma
annemieke.vanbarneveld-biesma@wur.nl

Storyline

1. Background and source of financing
2. BioBased Circular: the Program
3. Why a Human Capital Agenda
4. Choices for learning communities
5. From stakeholders to a consortium
6. Plans for the coming years

1. Background and financing- The Dutch National Grow Fund

- Temporary Fund for sustainable economic growth
- Innovations for societal challenges & high tech
- Strategic lever – not merely investing but reshaping sectors
- 11 billion EUR for 50 projects
- 5 rounds foreseen 3 completed before defunded

2. Biobased Circular: the Program

Total program budget € 850M Euro
of which € 338M Euro NGF subsidy
phase 1: 2024 -2026 € 102M granted
phase 2: 2027-2032 € 236M reserved

Impact in 2050

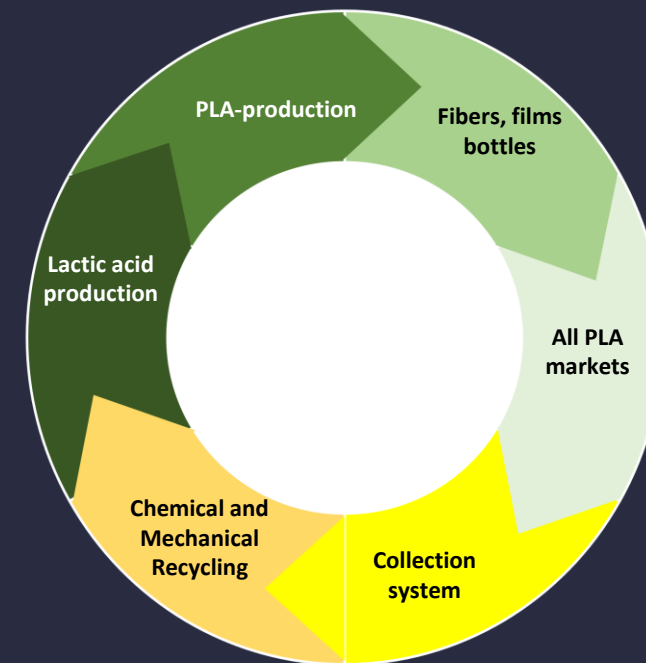
~ 2.5 Mton CO2 emissions reduction
€ 1.5 bln economic growth



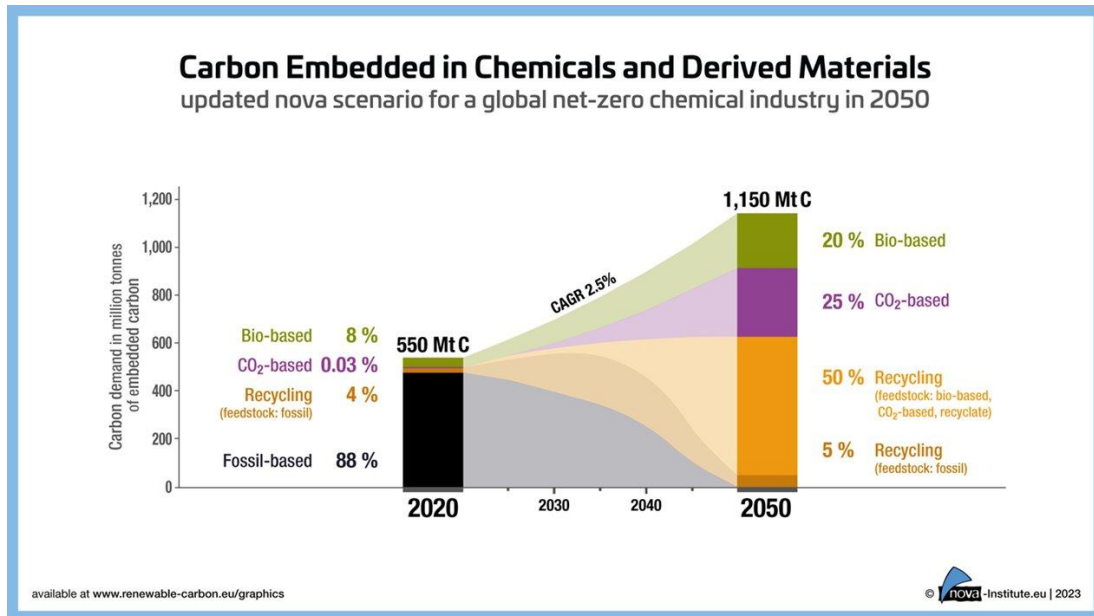
BioBased Circular supports a new circular industry for biopolyesters and its applications based on carbohydrate feedstocks

Ambition is to demonstrate economic and industrial feasibility by establishing five full-scale 'value circles' in **2032**

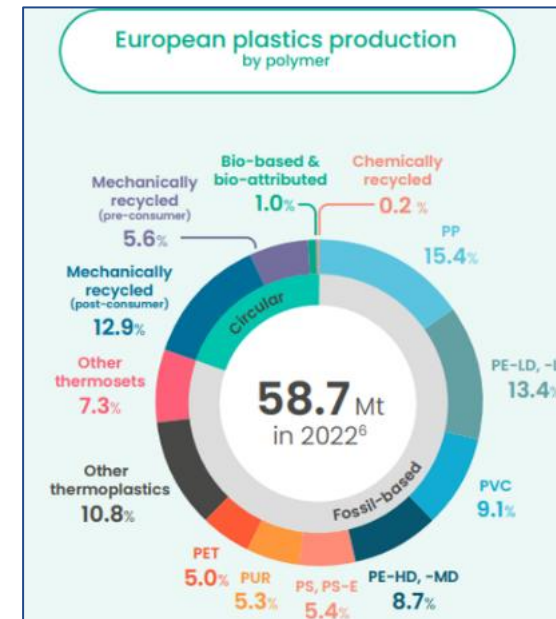
- PLA, PHA, PEF
- Coatings
- Resins



Global carbon industry



European plastics



2024: 59 Mt/yr
2050: 65 Mt/yr

Global plastics production: 400 Mt/yr

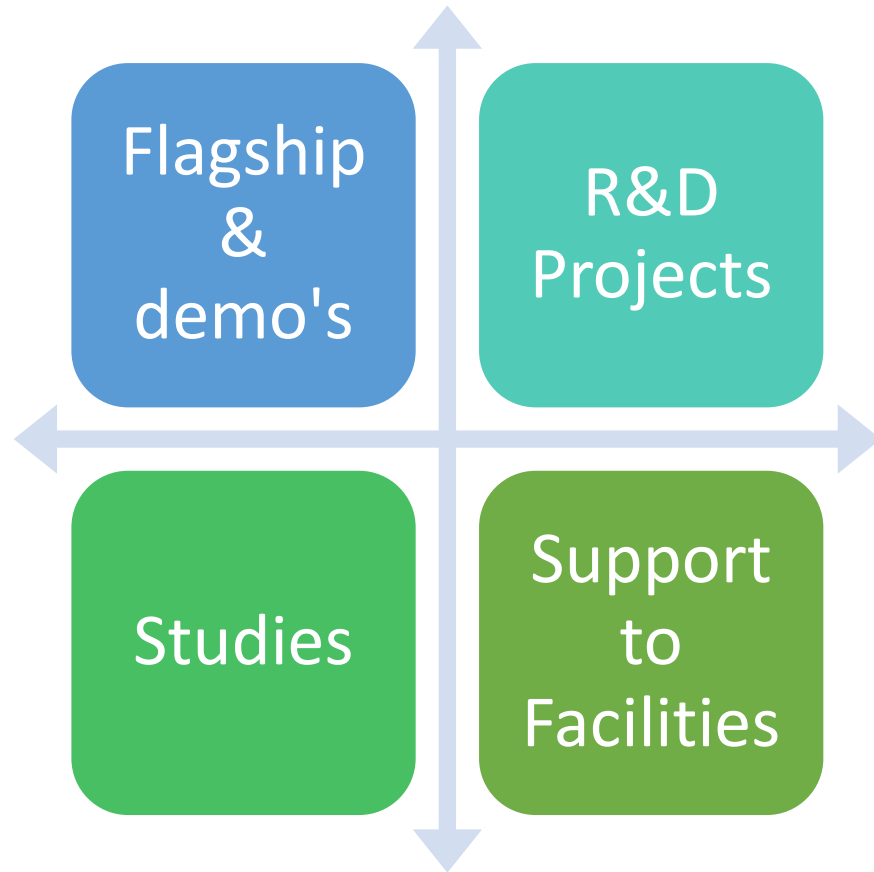
Focus of BBC

Biobased polyester value circles from carbohydrates

for large scale applications with impact such as:

- Packaging
- Building & construction and interior
- Textiles
- Coatings





How

- **Support for scaling up**
Promising ideas receive support to mature.
From idea to lab scale to demonstrator and to flagship
 - Pilot > Demonstrator > Flagship
- **Organization of value circles**
Removing barriers (intersectoral) collaboration
- **Financial support for research & development**
Solving the last technological barriers through innovation projects. Investing in R&D infrastructure
- **Educate – Human Capital Agenda**
Building strong learning communities

- Are there innovation programmes like this in your country & field?
- Do they have Human Capital Agenda's?

Take aways

- Human Capital is often overlooked as essential lever in large innovation investments for scaling up of new economies.
- A Human Capital and the role of education in it, should speak the language of the funder.
- Higher Education has a responsibility for getting human capital on investment agenda's, but cannot do it alone.

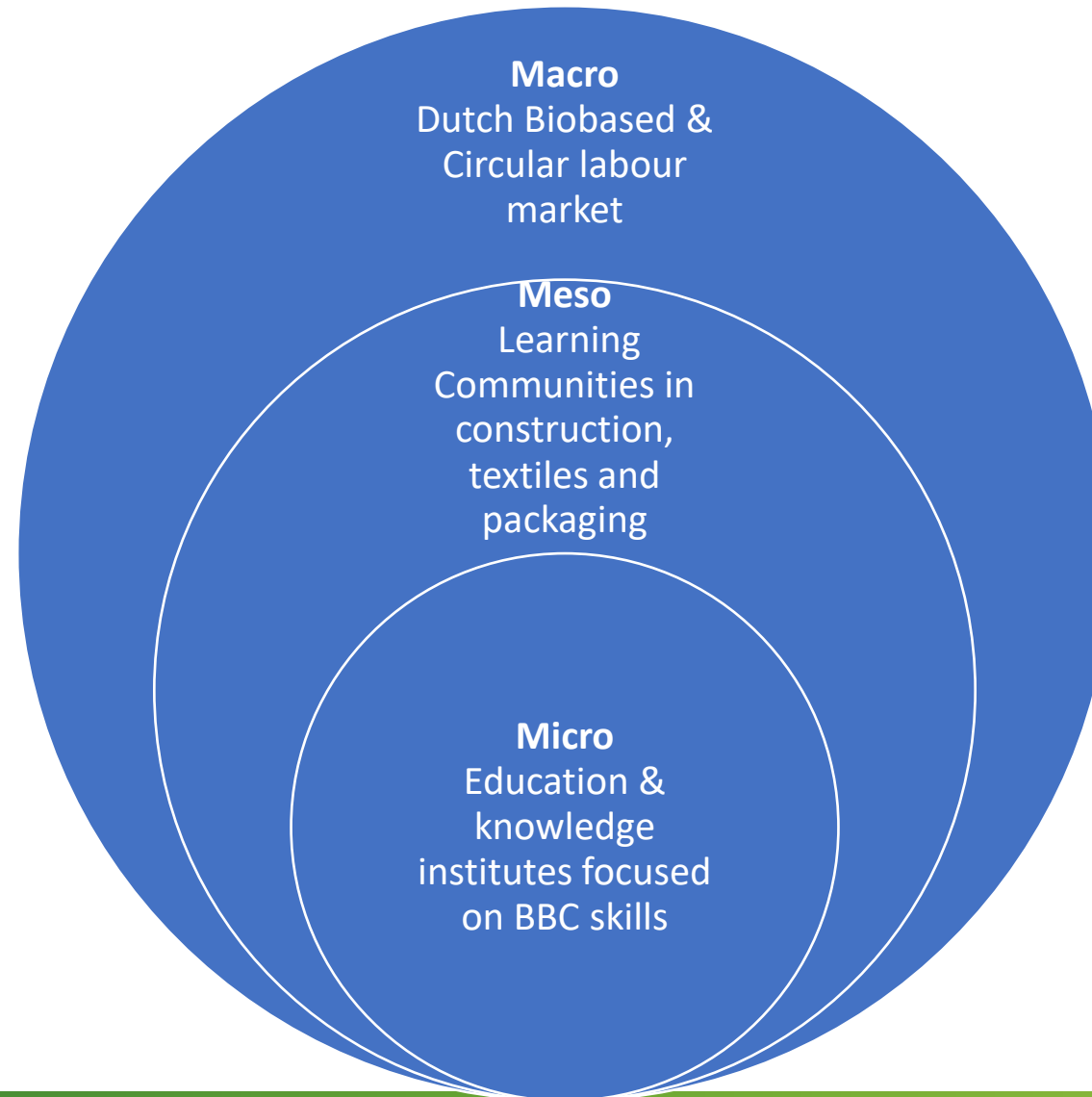
3. Why a Human Capital Agenda for BBC

- Valorising innovation learnings
- Strengthening public –private collaboration
- Preparing the (future) labour market

➔ **Transition to a Biobased & Circular sector by 2040**



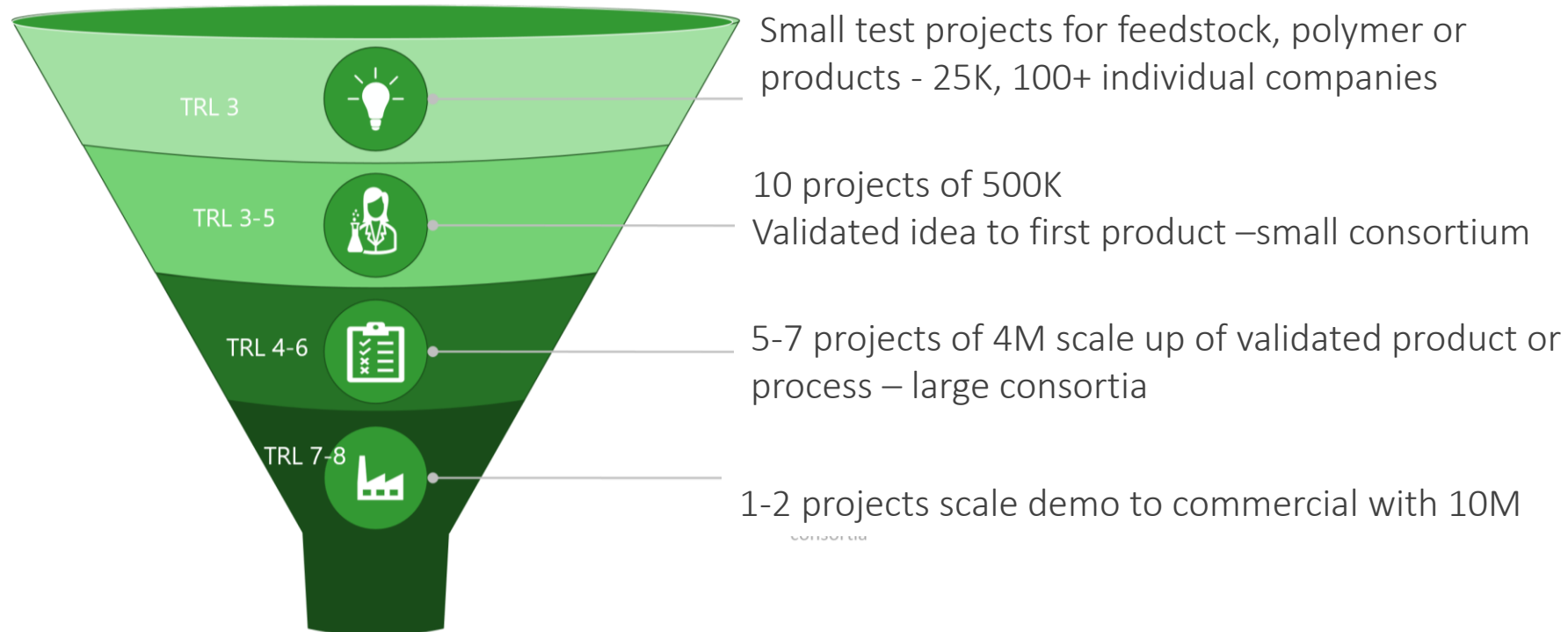
3 levels of the Human Capital Agenda



4. Choices for learning communities

1. Open calls for LC's versus a dedicated team
2. One versus all three of the 'why's'
3. Regional hubs versus sectoral hubs
4. Lifelong learning versus students
5. Highschool versus Higher Education





Learnings from the set-up

1. Invest early and start later: dependency on time path and choices of projects
2. Use a wide net and focused scope
3. Prepare challenges for the greater good: scope for mutual interest
4. Education won't jump up to learn, companies won't jump up to share: Facilitators are essential
5. Build in peer review and impact measurement to remain adaptable
6. Transition requires more than the sector itself: build in story telling



5. From Stakeholders to Consortium



Take away

- All partners need to identify their own strength and role: be a puzzle piece, not the puzzle.
- The involvement of researchers is not the same as the involvement of higher education.

7. Plans for the future

1. Exchanges between companies researchers and teachers
2. Dedicated messaging through excursions and guest lectures
3. New knowledge projects between companies & students/professionals
4. Training materials and trainings
5. Physical materials for teachers and other story tellers

