

# AllThings.Bio

GenB: Common Ground Camp  
21-22 February 2023, Athens

**Inspirational practice: the Allthings.bioPRO serious game**  
John Vos - BTG Biomass Technology Group BV



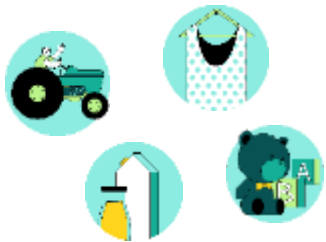
This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 887070. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.



# ATB Objectives

- Allthings.bioPRO - Game changer for the bio-based economy
- Motto: AllThings.Bio turns people into bio-heroes

## -- OBJECTIVES --



Promote the bioeconomy, raise awareness and support learning



Actively engage citizens, industry players and policy influencers



Develop a serious game and a smartphone app



Gather citizens to generate input and data

# ATB Approach to game development

- The ATB project provides **an innovative and interactive tool to raise awareness** about the bio-based industry and the bioeconomy. Building on active input of citizens, ATB focusses on four themes closely related to everyday life: 1. food packaging, 2. fashion & textiles, 3. kids & schools, and 4. jobs & careers.
- **Co-creative game design development:** many different game ideas were developed with citizens (including school kids) and other stakeholders.
  - Game ideas were mapped, and similar ideas were merged.
  - Basic game designs were created and later, a selection of basic game designs was advanced to detailed game designs.
- **Co-Design:** implementation of the game designs and development of the game.
- Implemented in 5 countries: Estonia, Germany, Italy, Netherlands & Sweden. Supervised and coached by Bonn Science Shop

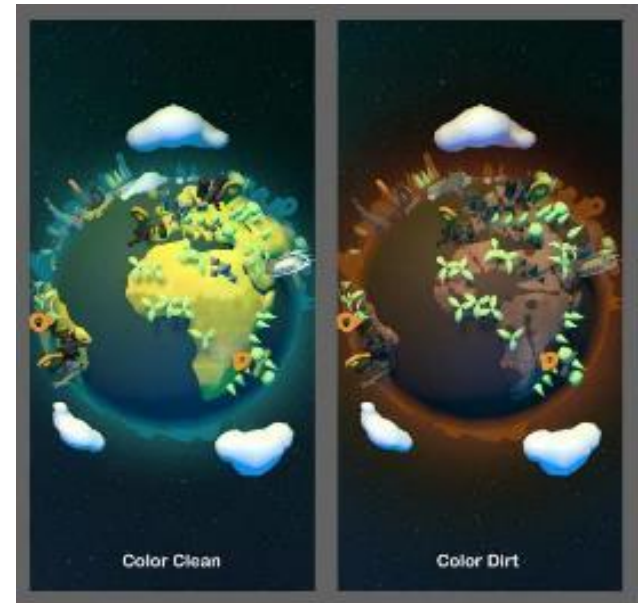
# ATB Serious Game & App in short

- **Serious game:** composed of 8 so-called campaigns, with each campaign focusing on a specific theme consisting of quizzes, real-life as well as in-game tasks, short mini-games introducing the player to value-chains producing bio-based products and a glossary summarising important definitions.
- **Companion app:** can scan (eco-)labels/logos and EU certification schemes, providing information on the sustainable performance of the scanned bio-based/bio-degradable product. Specifically focusing on non-food, non-energy bio-based products.



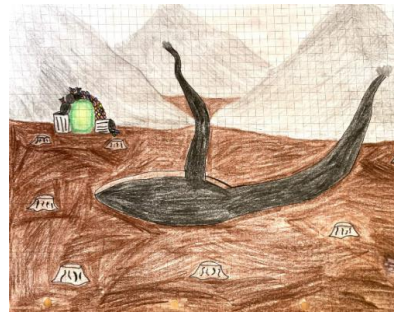
# Serious game – Mission BioHero

- **Goal** – save the Earth - based on suggestion from the Kids & Schools Co-Design groups
- At the start of the game, the Earth will look polluted. Through the course of the game, the Earth will turn clean and green as the player completes the challenges.
- **Who is the game for?** Above 12 years, access to mobile phone
  - General public
  - People interested in and with knowledge in bioeconomy
  - Teachers, schools
  - Career centres
  - Stakeholders from the bio-based industry, brand owners, policy influencers

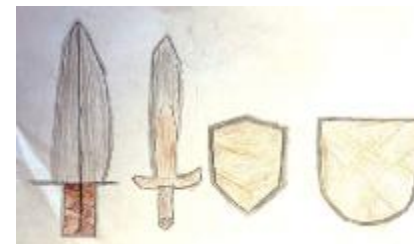


# Visuals from kids & schools co-design

Design suggestions for the for the avatar, equipment and other in-game creatures– examples (presentation by ATB)

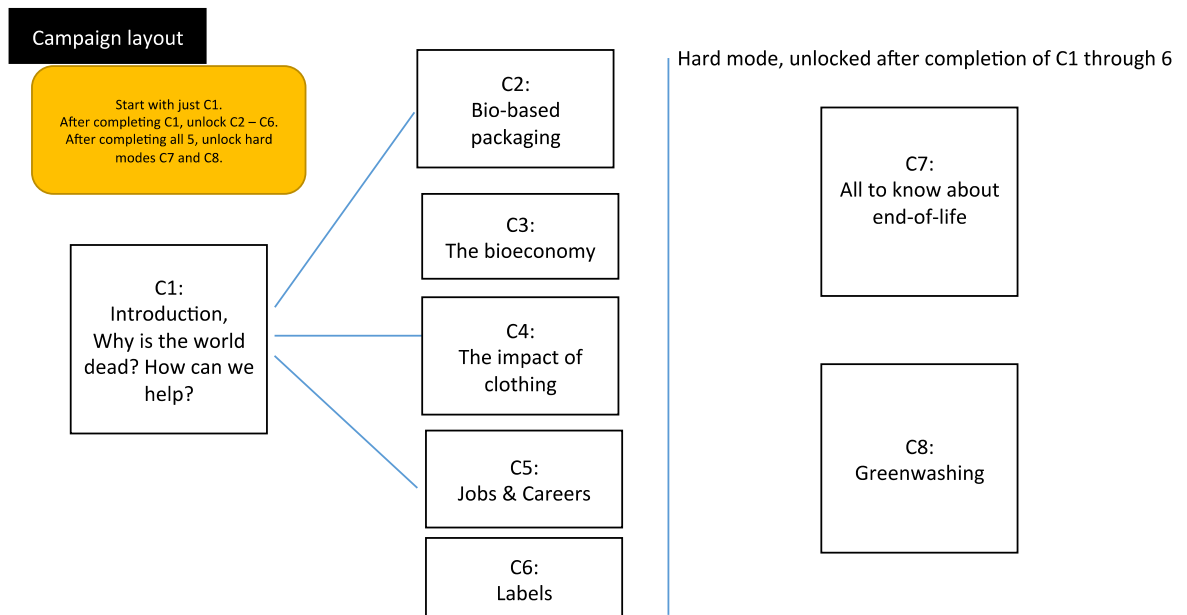


Design suggestions for the Earth – examples (presentation by ATB)



# The campaigns

- There are eight (8) so-called campaigns within the game. Each campaign focuses on one main theme.
- The campaigns are ordered in three difficulty levels. The most difficult campaigns, C7 and C8, can only be unlocked after completing campaigns C2 through C6.



# Each campaign combines different challenges

The **quizzes** are multiple choice quizzes on the environment topics

In a **mini game** the player turns a city with a non-sustainable value chain into a clean and sustainable city



**Tasks** require the player to mainly perform something in real life

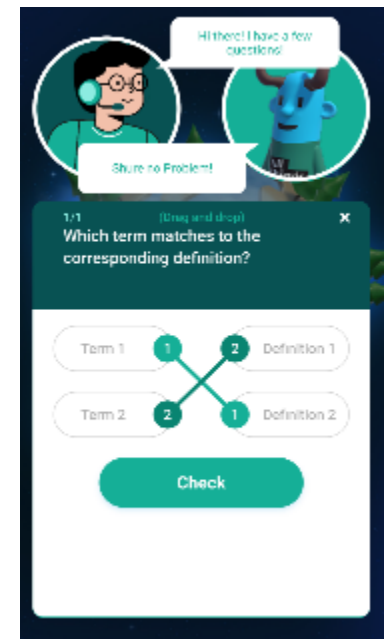
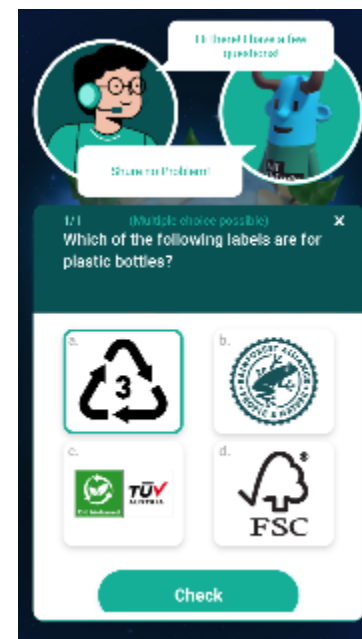
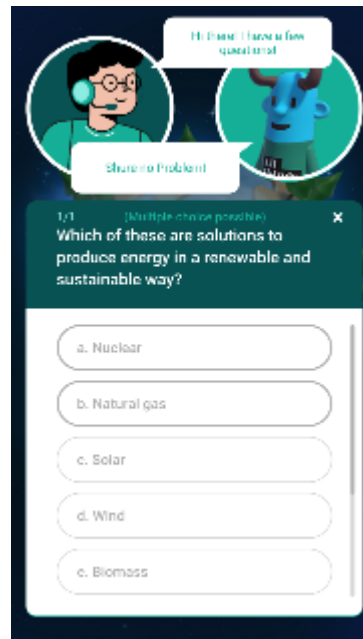
The special **skills** award specific abilities and in-game points

plus a **Lexicon** summarising important definitions



# Quizzes

- The goal of the **quizzes** is to test the player's knowledge about bioeconomy and various environmental topics. There are different kinds of quiz structures: matching questions and multiple choices questions.



Quizzes – examples (presentation by ATB)

# Tasks

- The goal of **tasks** is to challenge the players to actively fulfil tasks in real life (or in-game) that encourage a more bio-based and sustainable lifestyle.

Tasks – examples (presentation by ATB)

Hi there! I have a few questions!

Share no Problem!

1/1 (Full)

We all travel everyday, but what is the cost? Fill in the fields below and you'll receive the amount of CO2 u produced.

Distance travelled

10km

Method of travel

Walking

Bike

Car

Check

Hi there! I have a few questions!

Share no Problem!

1/1 (Full)

Check the energy label of your home refrigerator.

Energy label

A

B

C

D

E

F

G

Check

1/1 (Full)

Order the following activities and products by their estimated greenhouse gas emissions. Put the lowest emission first.

10 cotton shirts

1000 km by plane

1000 km by car

1000 km by train

100 PET bottles

Lowest

Highest

Check

Task

Unpackaged Food for 7 Days

Lorem ipsum

Buy fruits and/or vegetables for the week without using any plastic! Some shops offer them in paper bags, or you bring your own bag! [Unpackaged food](#) has a lot of advantages for the environment, and many fruits come in their own, natural packaging. That way you can easily avoid plastic waste!

7 Day

Did you avoid plastic packaging today?

Yes

No

1/7

# Mini games

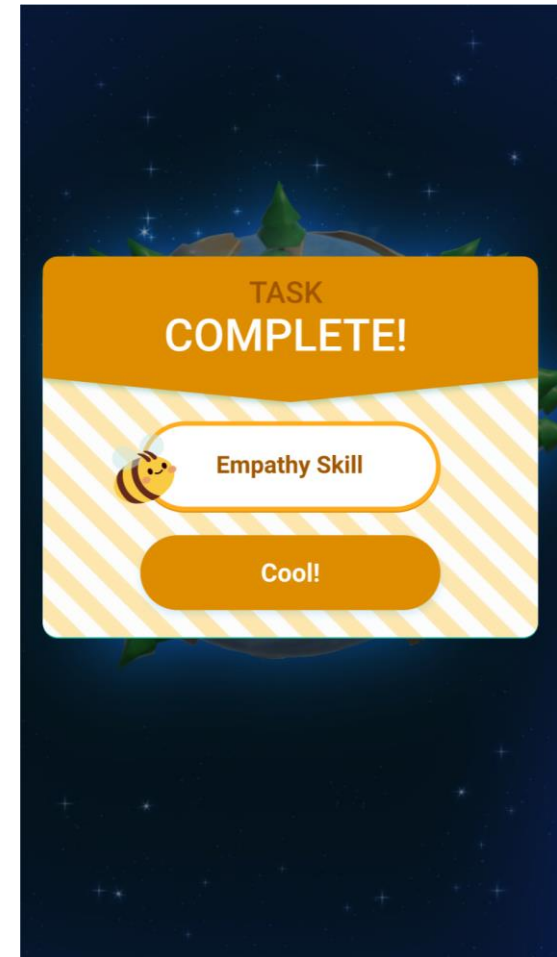
- The goal of the **mini game** is to turn a city with a non-sustainable production chain sustainable and circular. The objectives are to make the people living in the city happy and to reduce pollution levels in the city.



City builder mini-game – examples (presentation by ATB)

# Skills

- Unlocked skills rewards players for performing well in the game by giving them new in-game abilities or items.
- The player has to clean a famous building/statue within the city where the mini-game takes place.



Skill unlock – example (presentation by ATB)

# Mobile app – Label BioHero

- **Linked** to Mission BioHero game
- You can **scan**:
  - Logos
  - Labels
  - EU certification schemes
- Provides info **on sustainable performance** of the scanned product: what the label stands for, which products it can be found on, which aspects it covers, what it guarantees and who owns/ operates the label
- Labels in the app will be split into **six different categories**: 1) bio-based content 2) Sustainability of forestry biomass 3) Textiles products 4) End-of-life (what happens at the end of the product lifetime, such as biodegradability) 5) Multi-issue (labels that cover more than one environmental aspect, e.g. Blue Angel) 6). Others (labels that are not directly related to bio-based or biodegradable products, as they deal with topics such as fair trade or recycling).



# Currently in Beta-version

September 2022 release of the first beta – version of:  
the serious game



and the mobile app



# Access to Beta versions of game and app



- user

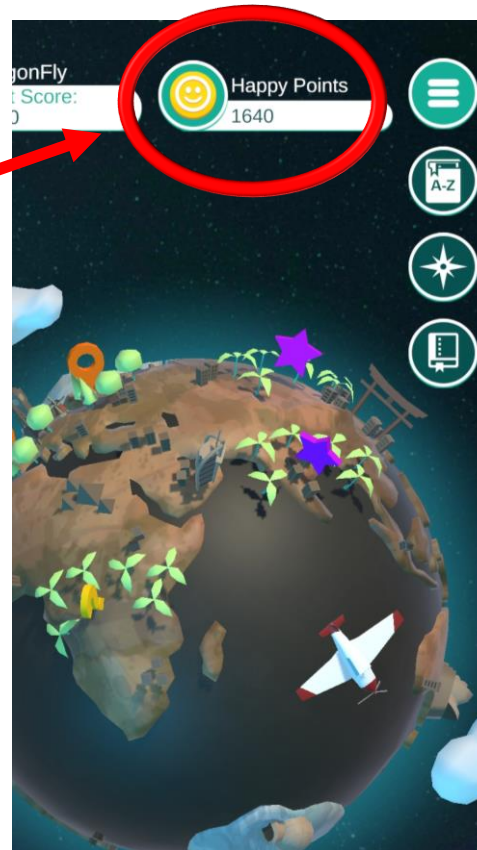


- user



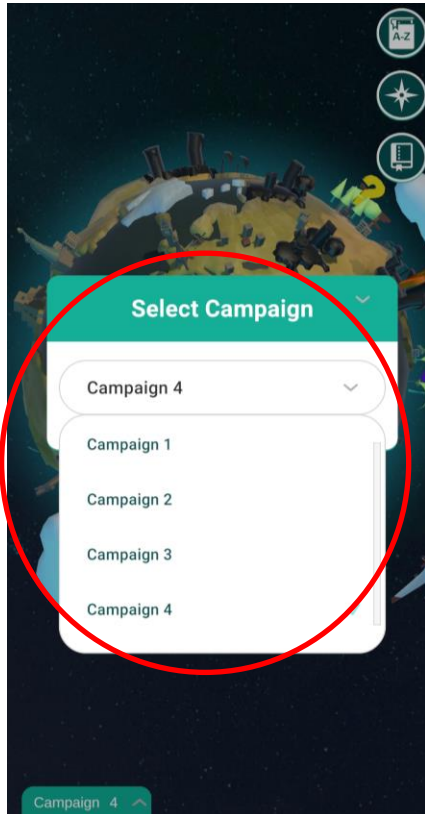
# Mission BioHero – Cheat code

In order to unlock all campaigns please **tap > 10 times** on the **icon** of the **Happy Points** in your upper right corner!





# Mission BioHero – Where is what?



Select the campaign you want to play



City-Builder



Tasks



Quizzes



Special Skill

# What's still to come

- Beta testing (since Nov 2022) will continue 6-8 more weeks.
- Beta testing has been going well so far - valuable feedback on the design and first mission of the game and the potential exploitability of both the game and the app
- Translations planned: Dutch, German and Italian
- Envisaged official release date: June/ July 2023
- Collaboration with European School Network agreed:
  - EUN will formulate suggestions how the serious game can be used for educational purposes
  - ATB team will produce an Answer Book



# Wrapping up

- **Coordinator:** Valerie Sartorius, FNR, [v.sartorius@fnr.de](mailto:v.sartorius@fnr.de)
- Your **presenter** today: John Vos, BTG, [vos@btgworld.com](mailto:vos@btgworld.com)
- AllThings.Bio website: <https://www.allthings.bio>
  
- **Feedback** on the Beta-version ?
  - By email: Maria Khrapunenko, IBS, [maria@ibs.ee](mailto:maria@ibs.ee)
  - Online survey: <https://survey.alchemer.eu/s3/90505174/ATB-Game-testing-feedback-survey>

# AllThings.Bio

Thank you!



This project has received funding from the Bio-based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 887070. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio-based Industries Consortium.