

Case Study: Role play - SAF Value Chain and Partnerships

How to become SAF ready? How to make SAF happen?

SAF Training for ACI Africa & AFRAA

23.-25.04.2025, Arusha, Tanzania

Day 1 Section 2: Value Chain & DSL - Our guiding principle for this training

Topic

Role Play: SAF Value Chain and Partnerships



Christoph Behrendt-Rieken



christoph.behrendt-rieken@eu-sea-ccca-corsia.org
cbehrendt@cbr-partner.de



CBR Sustainability Partners



CEO & Founder

More than 15 years experience in the chemical process industry, large production infrastructure projects and technology development with focus on green transition of various industries via ClimateTech related innovation (renewable fuel, green chemistry, sustainability, environmental management systems, environmental certification, etc.)

Consulting Focus @ CBR Sustainability Partners

- Commercial project development and deal advisory (due diligences, etc.) of green energy, fuel and chemicals investments and production plant projects
- Renewable fuel and chemical regulatory, commercial and technology expertise

Education

- EMBA -Executive Master of Business Administration-, Kellogg School of Management at Northwestern University / WHU Otto Beisheim School of Management
- Diploma -International Business Studies-, University of Paderborn, Germany / École Supérieure de Commerce de Reims, Grande École / NEOMA Business School, France.

Day 1 Section 2: Value Chain & DSL - Our guiding principle for this training

Topic

Role Play: SAF Value Chain and Partnerships



Raphaela Spielberg

@ raphaela.Spielberg.ext@easa.europa.eu
rspielberg@cbr-partner.de

 CBR Sustainability Partners

 Project Manager

Raphaela Spielberg has over 7 years professional experience in the financial field, and 5 years of experience in strategy development and implementation of impact projects and climate technologies and with experience in thematical investment consulting and climate risk management of ESG compliant projects. She is experienced in assessing and developing business cases in the PtX field, analysing global challenges and opportunities, executing the financial modelling and conducting deep-dive research of risk and sensitivity.

Consulting Focus @ CBR Sustainability Partners

- Project management and business planning, e.g., application support for EU funding programs for the demonstration of innovative low-carbon technologies (EU Innovation Fund)
- Sustainability (CSR) and ESG concept development and implementation (strategy, roadmaps, reporting, labels)

Education

- Sustainability & Climate Risk Professional, GARP
- Master in Sustainable Finance, NOVA SBE, Lisbon

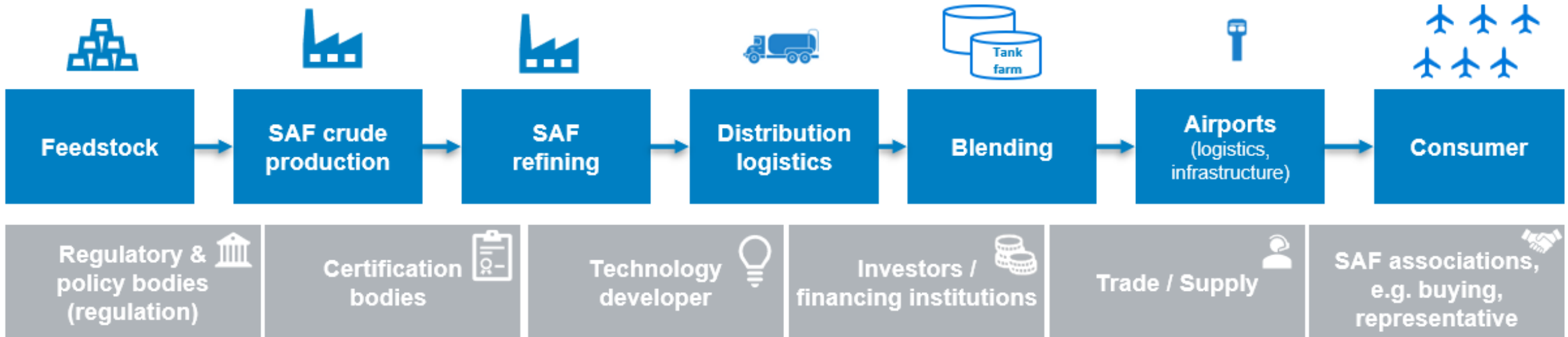
SAF Direct Supply Lines are self-sustaining supply chains for Sustainable Aviation Fuels, fundamental to boost sustainability in aviation

Steps and actors *along* the SAF value chain: New possibilities, new feeds, new players and partnerships

A **Direct Supply Line (DSL)** for SAF is a **self-sustaining network** of **regional supply chains**, consisting of a **local feedstock**, a commercial fuel **production plant**, and long-term **offtake partners**.

Stakeholders *around* the SAF value chain: Leveraging existing infrastructures and industry best practices

This is a complex system involving **multiple stakeholders**. While such a supply chain is **not yet fully established for SAF**, **similar frameworks exist in fossil aviation**, and much of this existing infrastructure can be leveraged for sustainable aviation.






“The SAF journey is only as strong as its weakest link.”

Today's learning journey

Guiding Questions




As we go through this session, consider the following questions:

-  What are your **own primary concerns** and **expectations** about SAF?
-  What's your **stakeholder's primary concern**?
-  What **solutions, compromises** or **commitments** can you think of and offer?

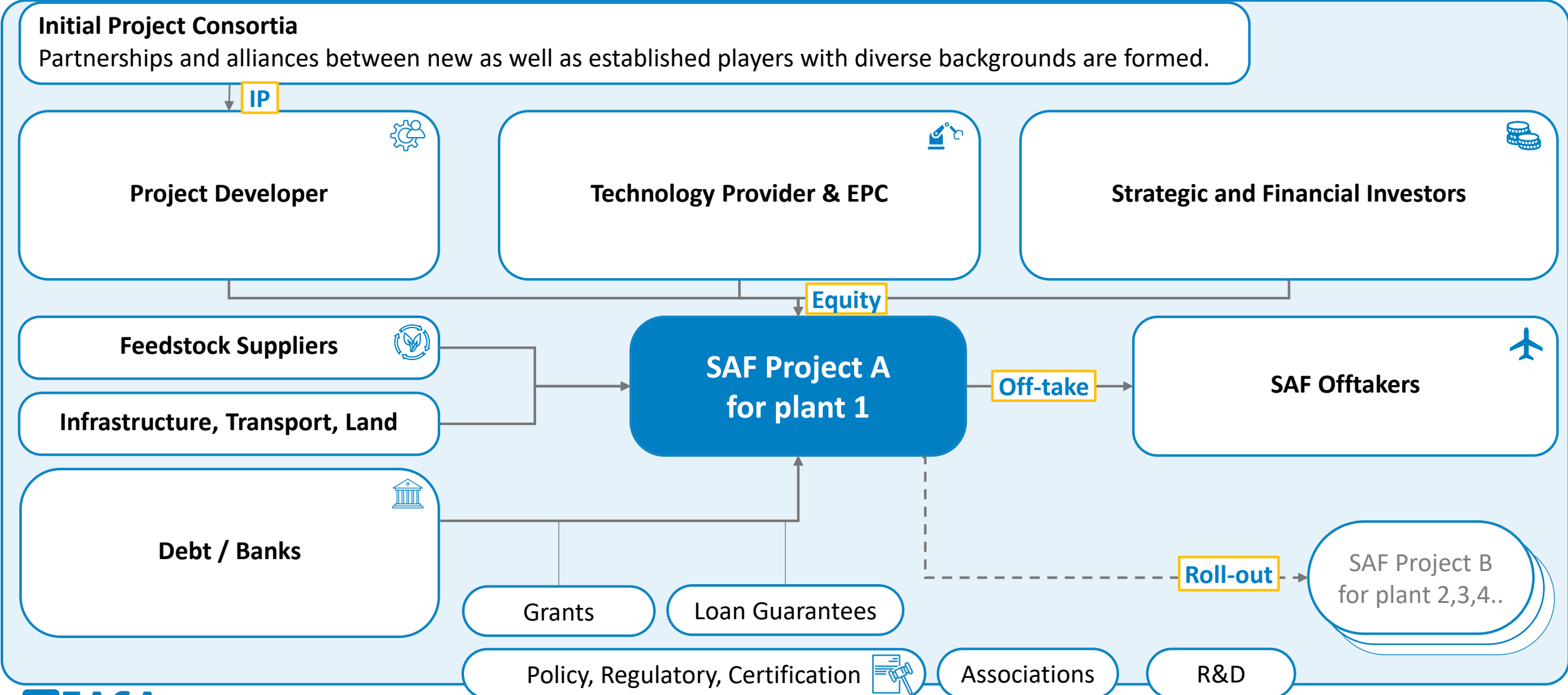


Objectives

By the end of this session, you will:

-  Understand the **roles of stakeholders** along the SAF value chain
-  Identify **key collaboration challenges** and **opportunities**.
-  Develop **strategies** for effective **partnerships** to scale SAF adoption

The successful development of a Direct Supply Line for SAF depends on a robust partner ecosystem to lay the foundations for future plant roll-out



Your group work: Tackle DSL Challenges & Build Solutions

Take on the **role of a specific stakeholder** and tackle the **specified challenges** related to a DSL from that stakeholder's perspective.



Group work:

- You will be divided into **five groups**, with each group representing a different stakeholder profile.
- **Discuss the DSL challenges** your stakeholder group faces, **add new challenges** that come to your mind and **propose how to collaborate with other stakeholders** to overcome these barriers and provide **first sketches of solutions**.
- You will have **20 minutes** to dive into your group discussion and to **fill out the worksheet** with first solutions.
- Each group has **5 minutes** to present their proposed solutions **to the full audience**.

Understanding the stakeholders' role, challenges and business objectives

Challenges

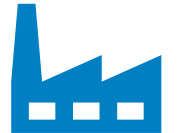
1. Feedstock provider

Supplies used cooking oil (UCO) facing different challenges: (1) Unstable collection volumes from municipal areas; (2) competition from exports and (3) varying quality requiring intensive pre-treatment (costs)



2. SAF Producer

Operating bio refinery (HEFA pathway) facing challenges (1) to sign long-term, binding offtake agreements due to high prices, (2) plant performance due to varying feedstock supplies and (3) qualified labour for operations and maintenance



3. Airport

Keen to promote SAF adoption and provide SAF at the airport but facing (1) the problem of SAF access (availability), (2) infrastructure limits (logistics, storage, etc.) and (3) SAF quality assurance (blending, etc.)



4. Airlines

Keen to deploy SAF into its operations to respond to regulations (CORSIA, ReFuelEU) but facing challenges of (1) SAF availability, (2) high green premium and (3) unstable customer demand and willingness-to-pay



5. Regulatory bodies (industry policy makers)

Ambition to support local SAF production to create socio-economic benefits but challenges of (1) interdependencies of industry sectors (preferred use of feedstock, electrification, etc.), (2) variety of policy options and methodologies (mandates vs. incentives, GHG emissions reduction or volumes





Time to take action: Fill out the collaborative solutions for relevant challenges

Stakeholder role

Feedstock provider

Collects, pretreats and supplies used cooking oil (UCO) to the biorefinery

Stakeholder DSL interfaces

1. ...
2. ...
3. ...

Challenges

Challenge description

Proposed solutions with required collaborators

A

Unstable collection volumes from municipal areas

1. ...
2. ...
3. ...

B

Competition from exports

C

Varying quality requiring intensive pre-treatment (costs, delivery delays)

D

...

E

...



Time to take action: Fill out the collaborative solutions for relevant challenges

Stakeholder role

SAF Producer

Operating bio refinery (HEFA pathway) to produce SAF and distribute it to selected airports by various transport modes

Stakeholder DSL interfaces

1. ...
2. ...
3. ...

Challenges

Challenge description

Proposed solutions with required collaborators

A

Long-term, binding offtake agreements with airlines due to high prices and market uncertainty

1. ...
2. ...
3. ...

B

Plant performance due to varying feedstock supplies

C

Qualified labour for operations and maintenance

D

...

E

...



Time to take action: Fill out the collaborative solutions for relevant challenges

Stakeholder role

Airport

Promotion of SAF adoption and (physical) provision of SAF at the airport

Stakeholder DSL interfaces

1. ...
2. ...
3. ...

Challenges

Challenge description

Proposed solutions with required collaborators

A

SAF access (availability)

1. ...
2. ...
3. ...

B

Infrastructure limits (logistics, storage, etc.)

C

SAF quality assurance (blending, etc.)

D

...

E

...



Time to take action: Fill out the collaborative solutions for relevant challenges

Stakeholder role

Airlines

Deployment of SAF in its operations to respond to regulations (CORSA, ReFuelEU) and voluntary sustainability commitments

Stakeholder DSL interfaces

1. ...
2. ...
3. ...

Challenges

Challenge description

Proposed solutions with required collaborators

A

SAF availability

1. ...
2. ...
3. ...

B

High green premium

C

Unstable customer demand and willingness-to-pay

D

...

E

...



Time to take action: Fill out the collaborative solutions for relevant challenges

Stakeholder role

Regulatory bodies (industry policy makers)

Ambition to support local SAF production to create socio-economic benefits (jobs, GDP growth, environmental protection, etc.)

Stakeholder DSL interfaces

1. ...
2. ...
3. ...

Challenges

Challenge description

Proposed solutions with required collaborators

A

Interdependencies of industry sectors (preferred use of feedstock, electrification, etc.)

1. ...
2. ...
3. ...

B

Variety of policy options and methodologies (mandates vs. incentives, GHG emissions reduction vs. volumes)

C

Green transformation as a nice-to-have in relation to dynamic geopolitical developments

D

...

E

...

Thank you for your attention!

easa.europa.eu/connect



Your safety is our mission.

An Agency of the European Union 