

The Direct Supply Line (DSL) Concept

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

The Direct Supply Line (DSL) Concept: Rationale, Strategic Requirements and Elements for Establishing a Direct Supply Line



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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

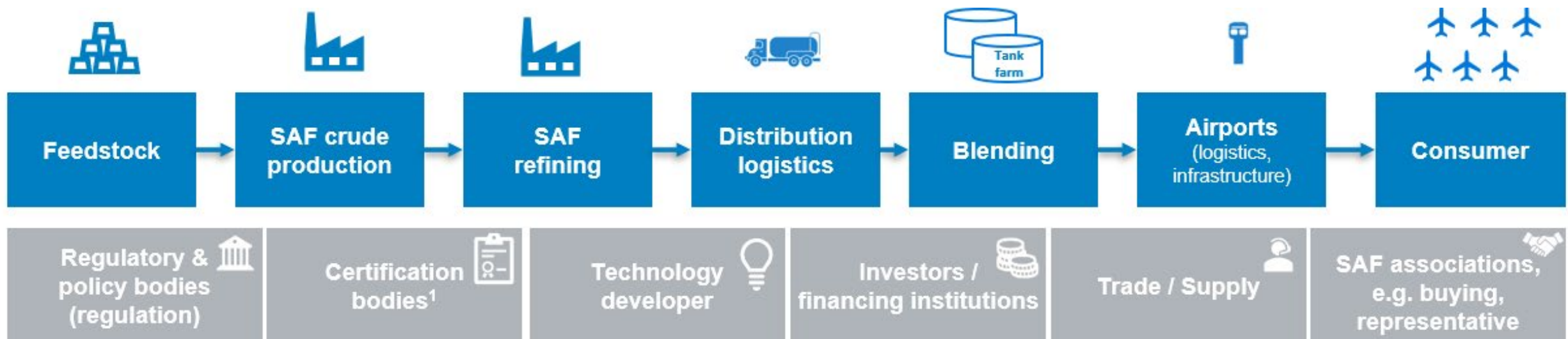
Direct Supply Lines are self-sustaining supply chains for sustainable aviation fuels, fundamental to boost sustainability in aviation

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 Direct Supply Line concept rationale – Guiding Questions



Who are **players** along and around the **SAF value chain** and what are their roles & expectations to enable projects?



Why it is crucial to understand each perspective to unlock the potential across **project lifecycles**?



How can **actors** engage and how does their positioning impact the **SAF project development**?



What are the various benefits of establishing **strong collaborations**; what is needed beyond?



Which **actions** need to be taken for a successful DSL implementation and which **tools** can be applied?



Which **challenges** do SAF producers, project developers and technology developers face?



SAF Direct Supply Lines are a key for the successful development and execution of national SAF roadmaps.

SAF roadmap objectives

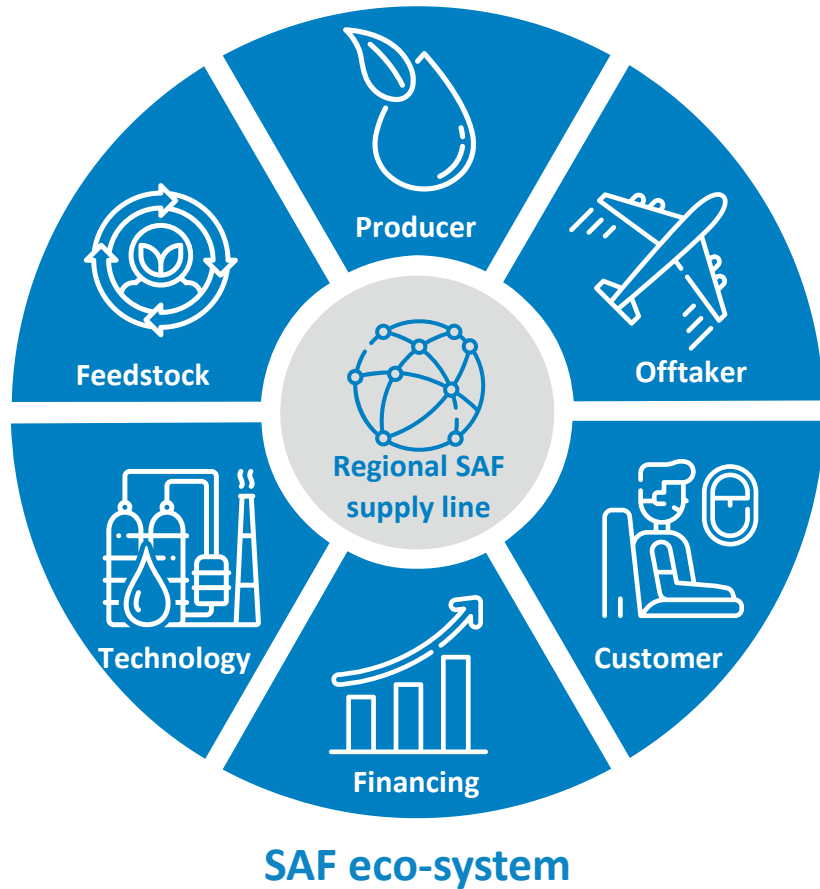
- 1 Expansion of SAF supply and use
- 2 Reduction of SAF cost
- 3 Enhancement of SAF sustainability



SAF roadmap building blocks

- 1 Feedstock Innovation
- 2 Conversion Technology Innovation
- 3 Building Direct Supply Lines
- 4 Policy and Valuation Analysis
- 5 Enabling End Use

The build-up of regional SAF supply chains is facilitated by Direct Supply Lines, from feedstock to final SAF uplift including the eco-system.



Local feedstock

Type and **availability** determining SAF pathway and technology

Commercial scale production

Existing refinery and **infrastructure** facilitating SAF capacity set-up

Offtake partners

Involvement of **national airlines** supported by incentive schemes

SAF policies

National supporting policies and **incentives** aligned with international regulation and certificates

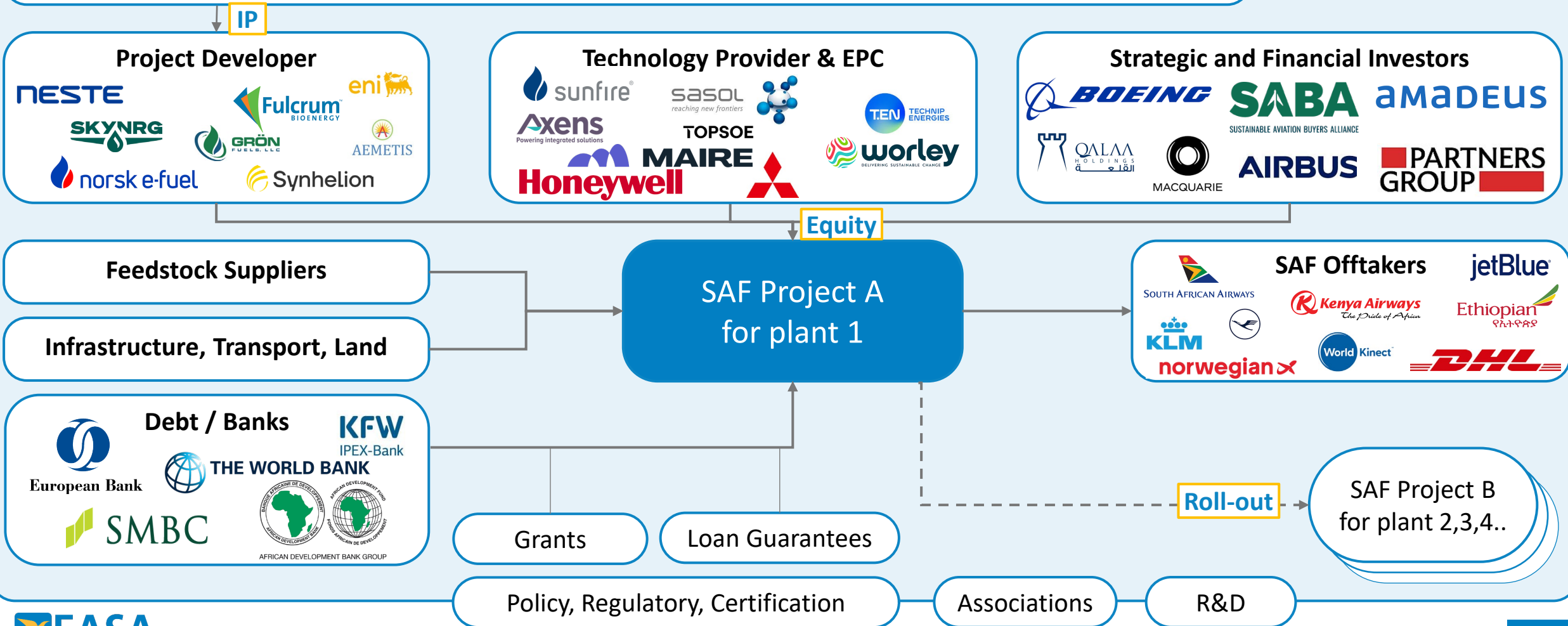
Regionality

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

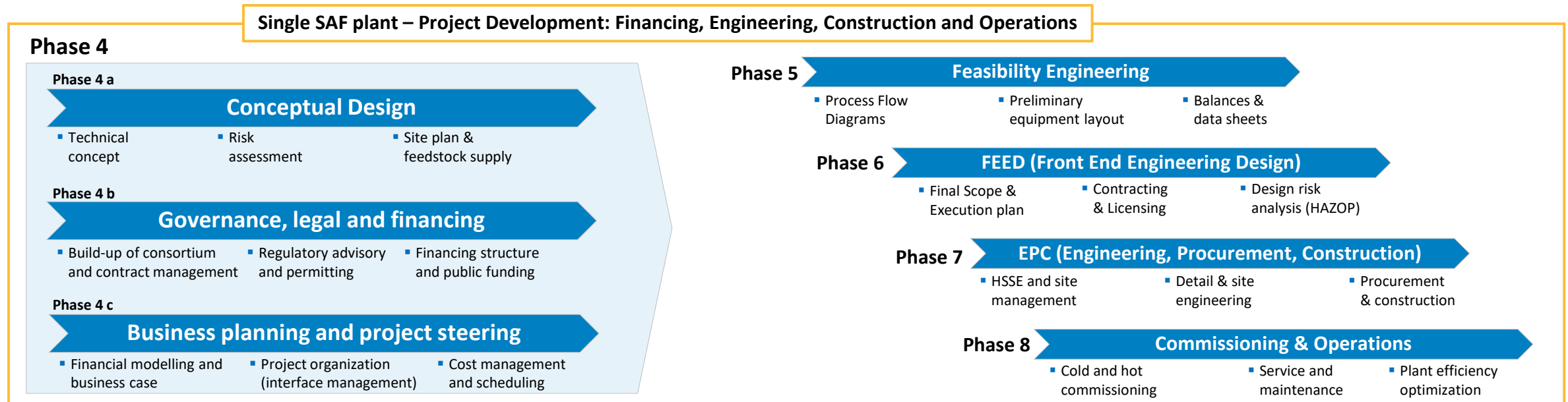
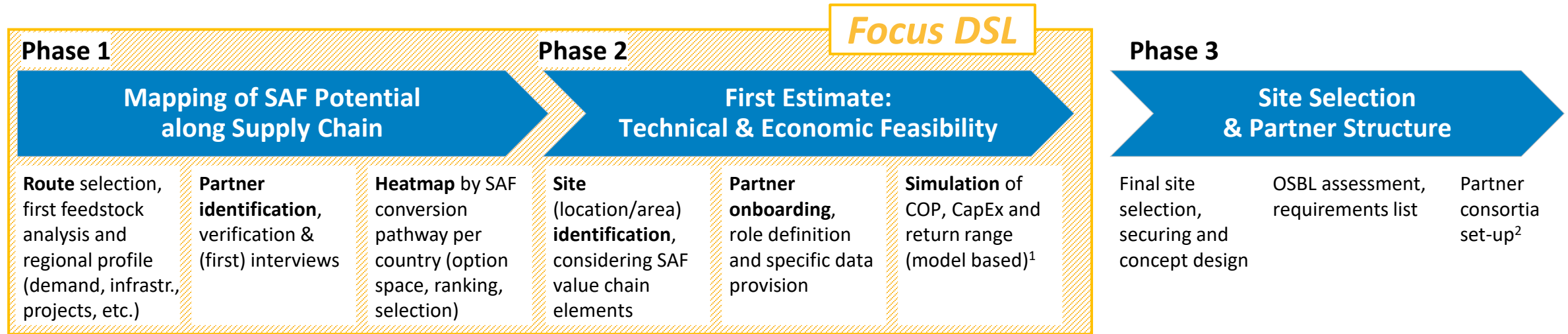
Initial Project Consortia

Partnerships and alliances between new as well as established players with diverse backgrounds are formed.

Non-exhaustive



At first comes the DSL, covering phases 1 and 2 of project development.



Ten DSL pillars form the basis for the DSL implementation, each providing it's own tools, from feedstock procurement to production and fuel distribution.

Section 1 of this workshop

1
Feedstock Provision
Secure sustainable feedstocks for SAF production.

- Identify feedstocks
- Sourcing and contracts
- Logistics and storage

2
Feedstock Preparation
Pre-treat feedstocks for SAF production.

- Pre-treatment facilities
- Technology selection

Section 2

3
SAF Production
Produce SAF from intermediate products.

- SAF pathway and site selection
- Technology provider selection
- Plant construction
- Economic viability & financing
- Operation & maintenance

4
Infrastructure Development
Create infrastructure to support SAF production and distribution.

- Site infrastructure
- Electricity and heat
- Plant construction
- Storage solutions
- Transportation networks

Section 3

5
Regulatory Compliance and Certification
Ensure compliance with regulations and necessary certifications.

- Regulatory approvals
- Certification

Sections 4, 5 and 6

6
Market and Offtake Agreements
Secure market demand through agreements with airlines, etc.

- Market analysis
- Offtake agreements
- Partnerships

Section 7

7
Distribution and Logistics
Efficiently distribute SAF to end-users.

- Fuel blending
- Distribution network
- Supply chain management

Section 8

8
Monitoring and Reporting
Ensure transparency and continuous improvement.

- Tracking systems
- Reporting
- Continuous improvement

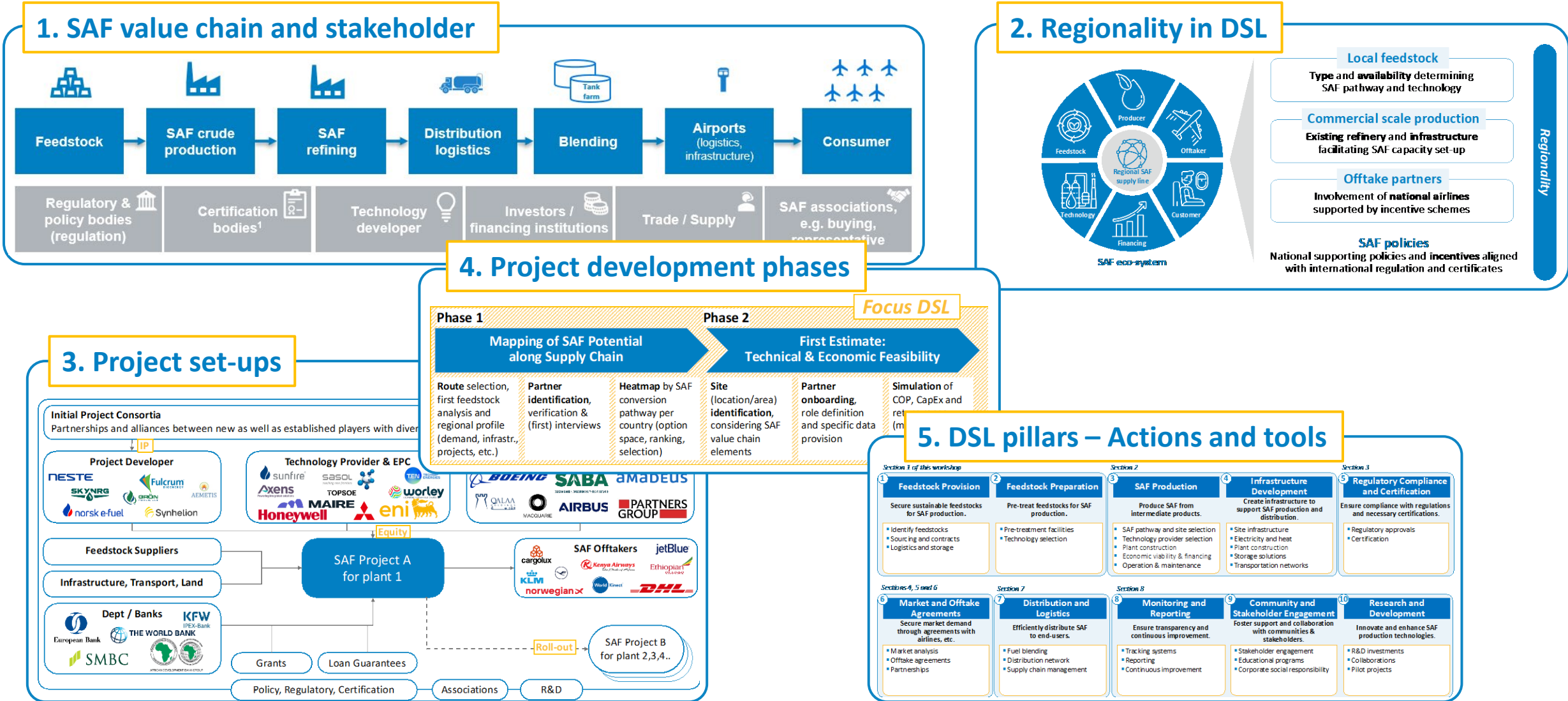
9
Community and Stakeholder Engagement
Foster support and collaboration with communities & stakeholders.

- Stakeholder engagement
- Educational programs
- Corporate social responsibility

10
Research and Development
Innovate and enhance SAF production technologies.

- R&D investments
- Collaborations
- Pilot projects

The Direct Supply Line concept rationale – Summary



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