Brief introduction to Clean Sky

Innovation Takes Off

www.cleansky.eu

Clean Sky 2

Joint Technology Initiatives

- After a 1st phase started in 2008, the JTIs were continued / complemented within H2020, through a 20 b€ “Innovation Investment Package”
- Autonomous Public-Private Partnerships (“Joint Undertakings”) for industry-led Research & Innovation
- Electronics, medicines, fuel cells & hydrogen, aeronautics, biobased industries, rail
- Shared objective of creating synergies

Clean Sky
JOINT UNDERTAKING

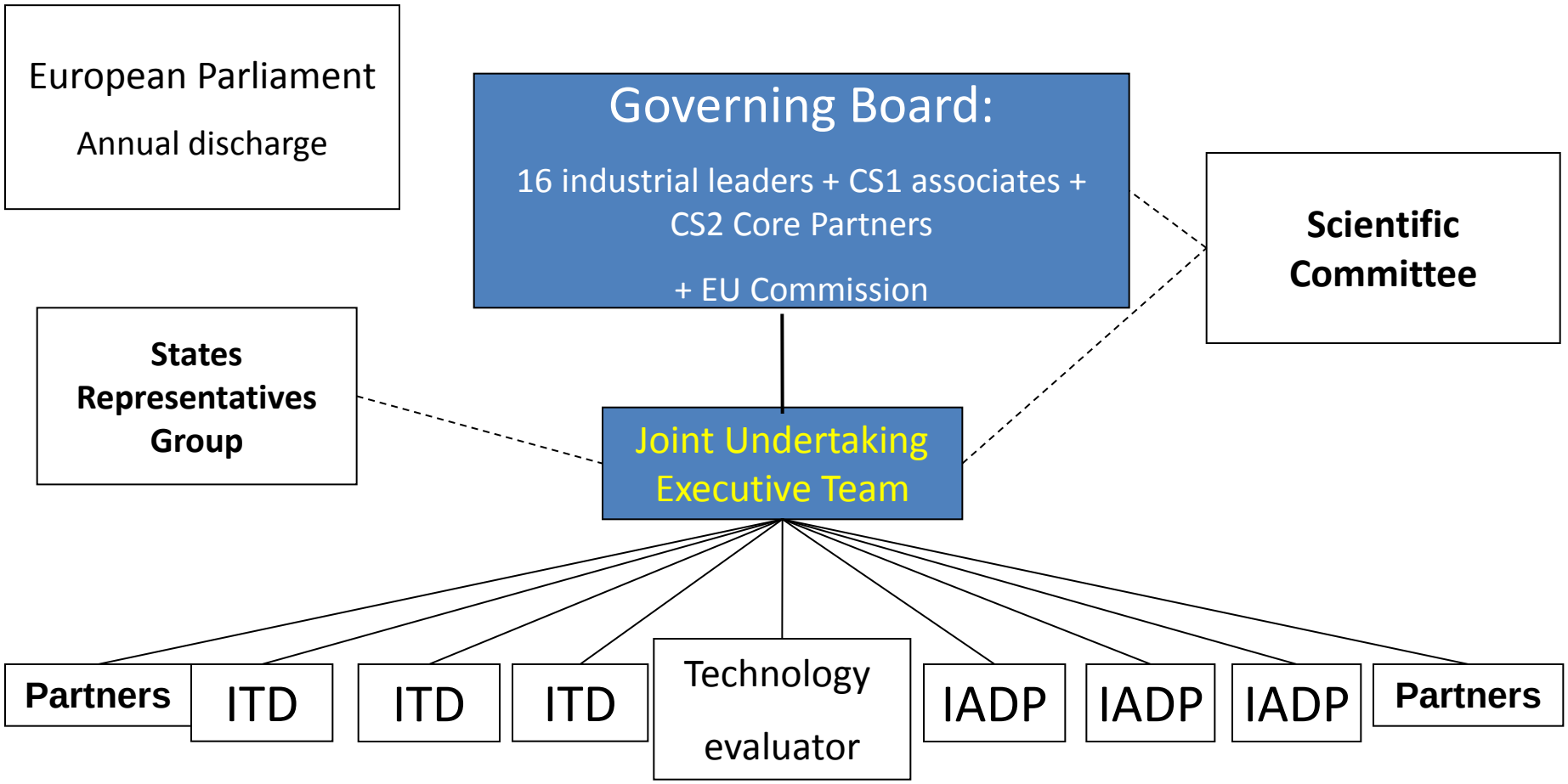
Clean Sky : Innovation takes off

Europe's largest Aeronautics Research Programme ever

- CS1 started in 2008 within FP7, up to 2017; **continuation decision in 2014 with CS2 in H2020**
- Environmental objectives for CS1
- **Environment, competitiveness and mobility for CS2**
- CS1: 1.6 B€ value, split 50/50 between the Commission (cash) and Clean Sky members and partners (in kind); **CS2: 4 B€**
- Integrated breakthrough technologies, up to full scale demonstrators
- 80 % of CS1 work achieved by end 2014, completion in 2016
- **CS2: 2014-2020 (2024)**
- 600 participants in CS1 – **CS2: up to 1000?**

Clean Sky
JOINT UNDERTAKING

Governance



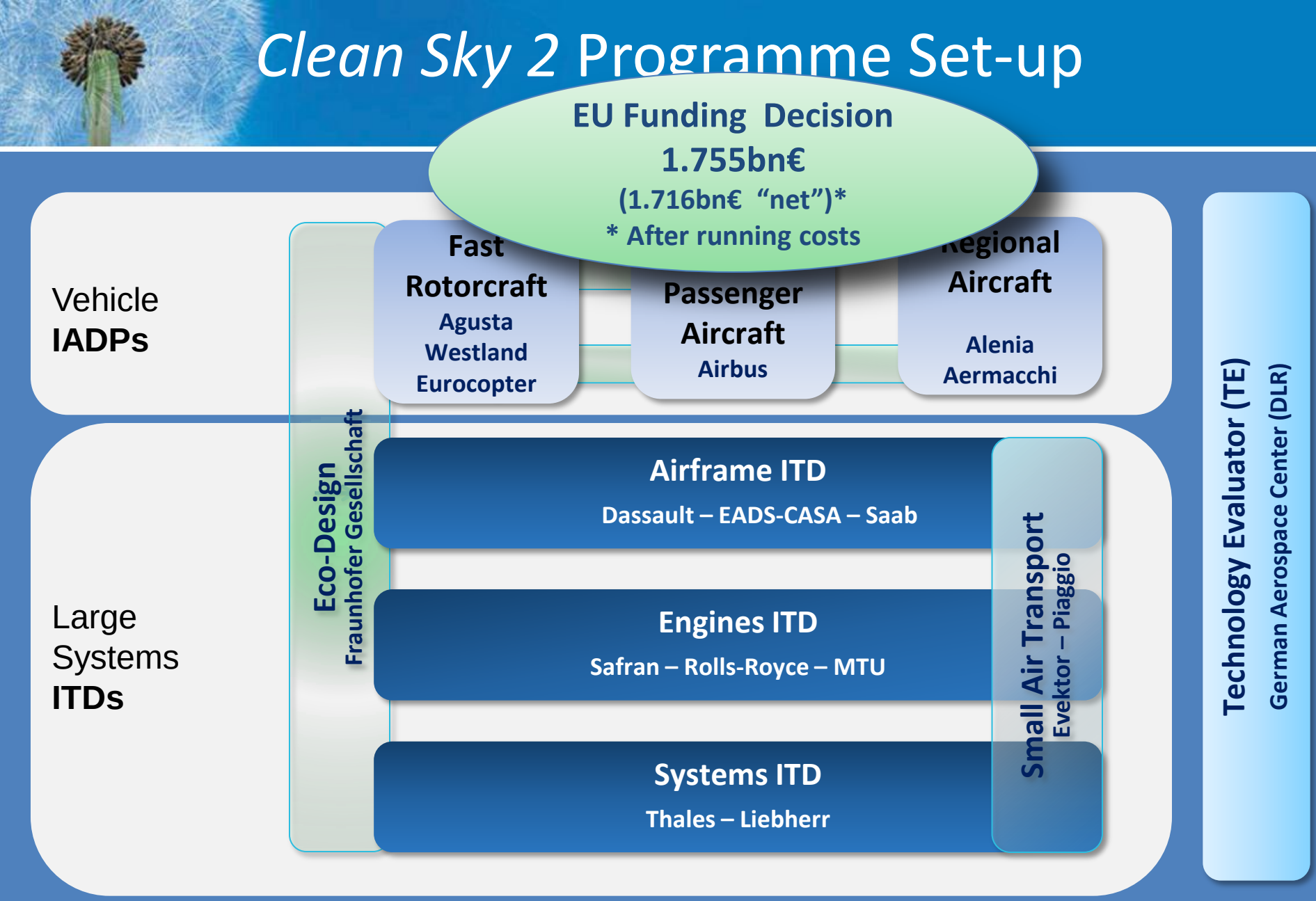
ITD: integrated Technology Demonstrator

IADP: integrated Aircraft Demonstration Platform

Consortia involving Clean Sky Members

Clean Sky
JOINT UNDERTAKING

Clean Sky 2 Programme Set-up

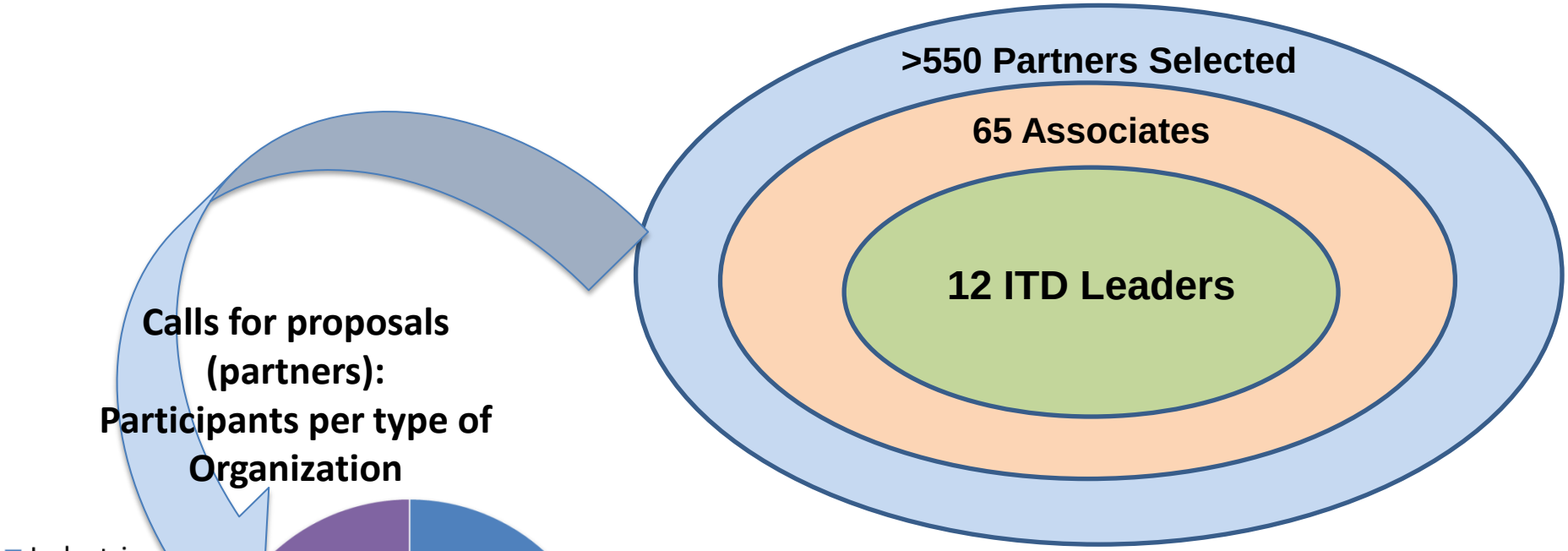


Building on Clean Sky, going further into integration at full aircraft level
And developing new technology streams for the next generations of aircraft

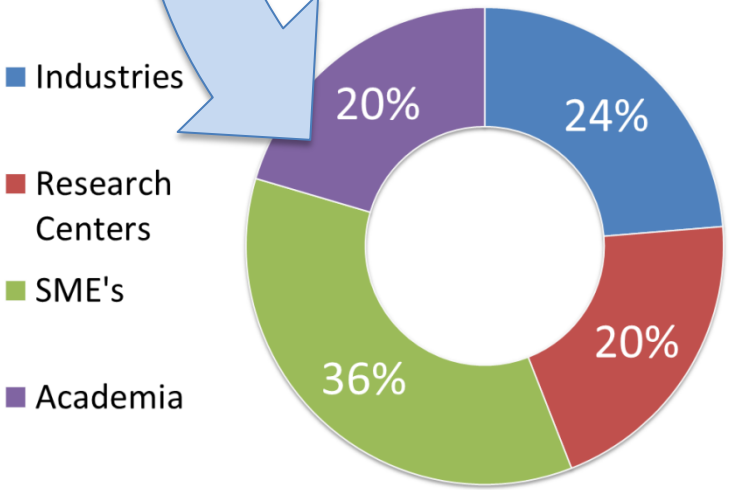
Zoom on systems ITD: level 1 WP

- **Avionics Extended Cockpit**
- **Cabin & Cargo Systems**
- **Electrical Wing**
- **Landing Gear System**
- **Electrical Chain**
- **Major Loads**
- **Small Air Transport**

Clean Sky 1: an Innovation Chain of 600 entities – a wide ecosystem of SME, RO and Academia with the Industry



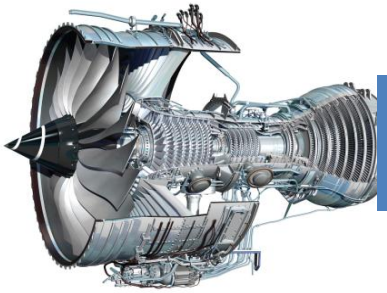
Calls for proposals (partners): Participants per type of Organization



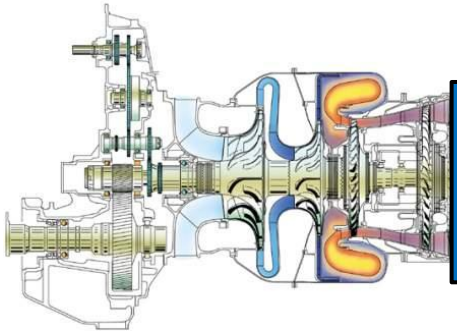
Clean Sky 2: similar organisation but the Associates (now called Core Partners) are selected through competitive calls

Clean Sky
JOINT UNDERTAKING

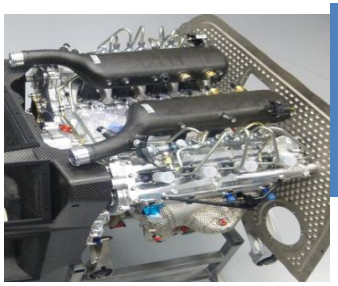
Clean Sky 1, September 2015: Well into demonstrators



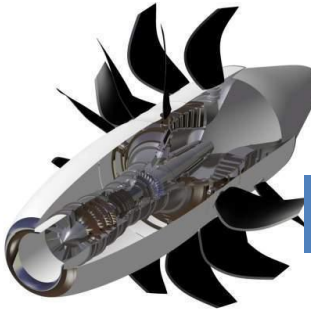
Large Turbofan



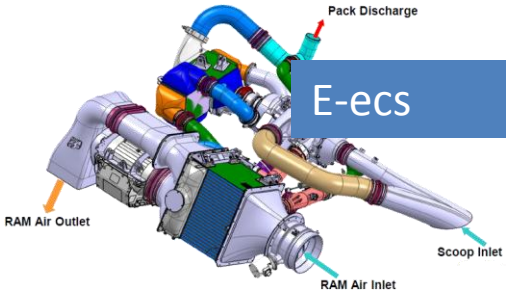
New Product emerging from technology development: ARRANO, selected for new H160 helicopter



Diesel cycle engine



Open Rotor



E-ecs

Laminar wing demo on A340

Composite fuselage on ATR72

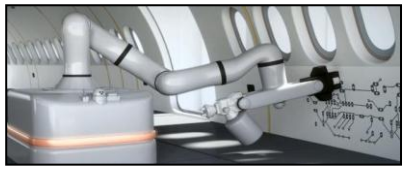
Clean Sky
JOINT UNDERTAKING

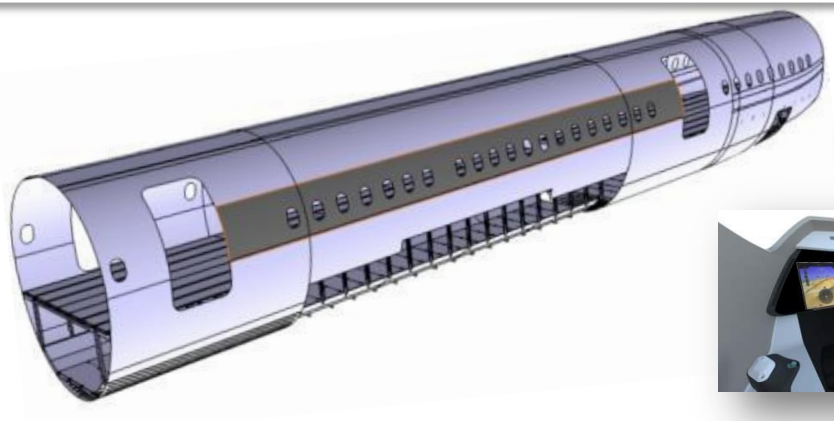
Addressing H2020 Transport Challenge Areas

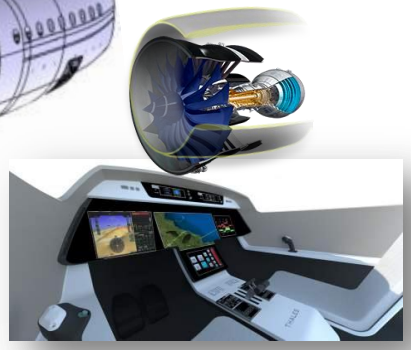
Energy, Resources & Environment

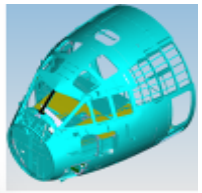
Safe & Seamless Mobility

Industrial Leadership









Clean Sky
JOINT UNDERTAKING

Scenarios – exploiting the results

New Product Timeline Assumptions for Clean Sky 2 Economic Case: Illustrative only

New Narrowbodies

2 new platforms entering into service around 2025 – 2030, 2 new engine programmes

New Rotorcraft

2 new platforms entering into service between 2020 & 2030, new engine and systems programmes

2020 | 2025 | 2030 | 2035 | 2040 | 2045

New Regional & Business Jets

Significant new European vehicles entering into service between 2020-2035, new engine and systems programmes

New Widebodies

2 new platforms entering into service between 2030 - 2035, 1 new European engine programme

Thank You

Clean Sky 2

AIRBUS
AN EADS COMPANY

AIRBUS HELICOPTERS

AgustaWestland
A Finmeccanica Company

Alenia Aermacchi
A Finmeccanica Company

DASSAULT AVIATION

DLR

AIRBUS DEFENCE & SPACE

evektor

Fraunhofer

LIEBHERR

MTU Aero Engines

PIAGGIO AERO

Rolls-Royce

SAFRAN
AEROSPACE · DEFENCE · SECURITY

SAAB

THALES

Disclaimer

- The selection of Partners will be based on Horizon 2020 Rules for Participation, the rules for submission of proposals, evaluation and selection of Partners as adopted by the Governing Board of Clean Sky 2 JU and will apply to the calls for Proposals
- The content of this presentation is not legally binding . This presentation wishes to provide a preliminary overview of these rules .
- The proposed content/approach is based on the consultation with the “National States Representative Group” and the “Task Force “ of the *Clean Sky 2* Programme Programme
-