AGENDA FOR TODAY

14:00 - 14:10 Welcome by Francisco Arenas (EASA)

14:10 – 15:00 Presentation of the Case study and Use Cases

Current status and stakeholder participation to DATAPP

- Identified limitations and proposed solutions
- Live survey and Q & A (slido)

Next steps

15:00 – 15:30 Success story for fuel scheme implementation – by T. Borer & G. Wilckens from Swiss

Q & A

EASA DATAPP PROJECT WORKSHOP

Transition to digital fuel management based on statistical models and consumption data

14th November, 2023

Francisco Arenas
EASA Technical Lead

Núria Alsina
ALG Project Manager

Antonio Cabeza
ALG Technical Lead

Andrada Bujor
ALG Team Leader

ALG

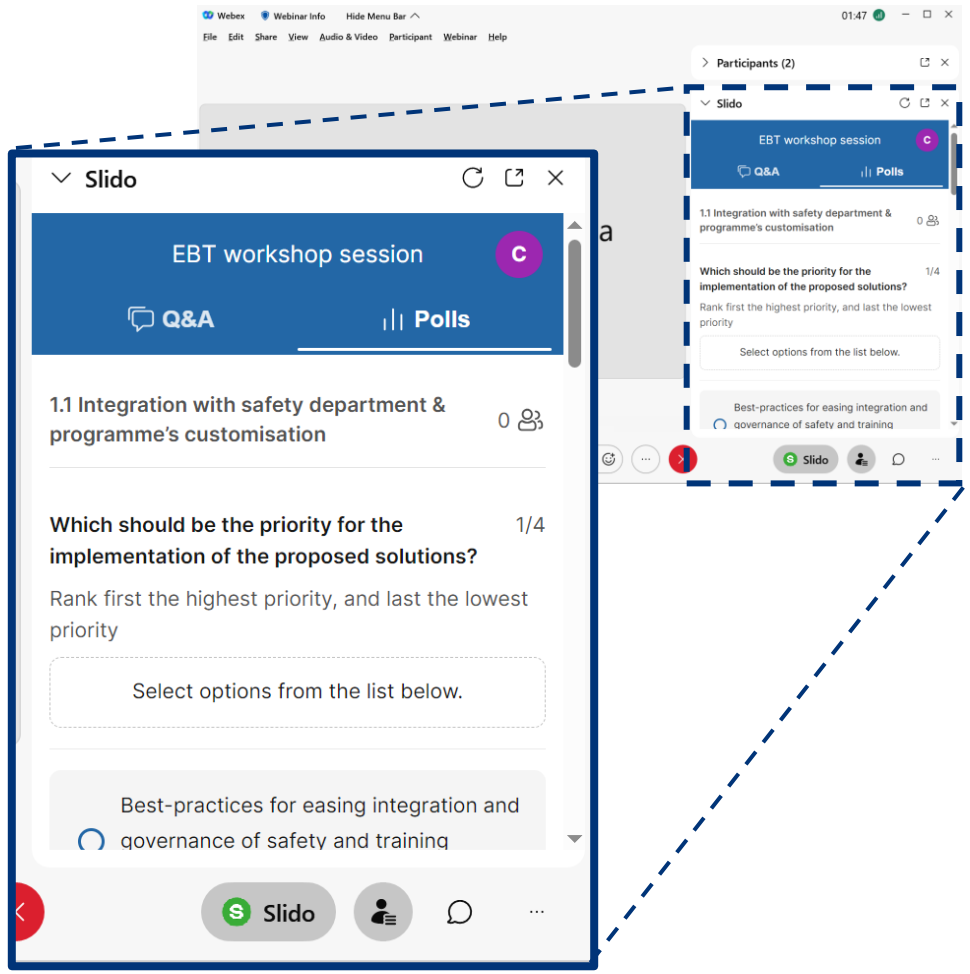
EASA
European Union Aviation Safety Agency

WE NEED YOUR INPUT

1. Each area will have a **topic-specific live survey and Q&A session**
2. You can **access the survey and Q&A under the Slido tab**
3. **You can participate in the survey** while we answer a few questions
4. Remember to **hit the Send button** once finished

Send

slido



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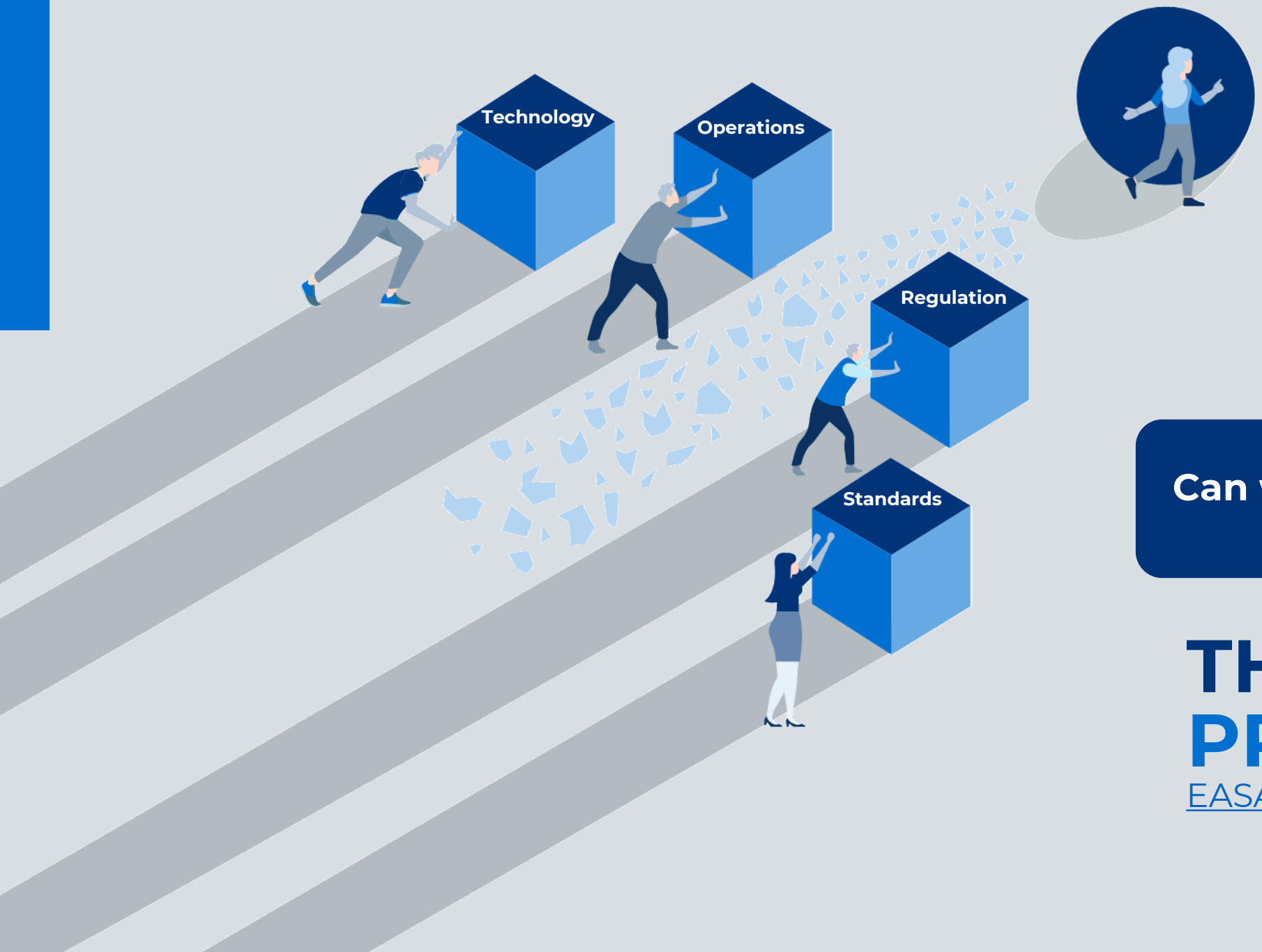

DIGITAL TRANSFORMATION

Can we keep the pace in all dimensions?

THE DATAPP PROJECT

EASA's Research Project

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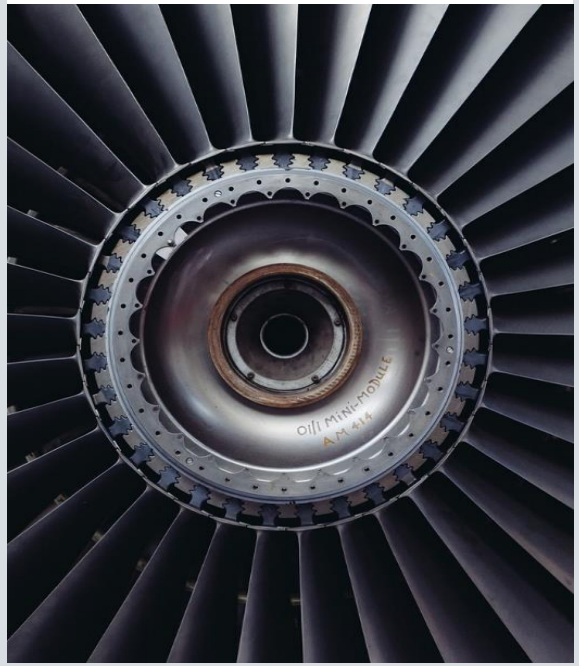
CASE STUDIES

The DATAPP project focuses its research on three different aviation fields, structured and particularised each on a Case Study

CS3 Flight training data for EBT and CBTA

CS4 Digital fuel management



CS5 Flight data models for safety

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WHAT HAVE WE DONE

TO DO

Literature review and digital solutions identification

Case studies definition & work plan

Definition of the case study

Working processes and limitations identification

34 Interviews

Attendance to EASA working groups

Webinar & Open questionnaire

Development of the case study

Propose solutions and evaluate the impact

Technical workshop

Propose changes to the regulation & standards

Roadmap and training material

Regulatory materials and standards

Deliver

We are here

DEVELOPMENT OF THE CASE STUDY

STAKEHOLDER CONSULTATION PROCESS

Big thank you to the many organizations and experts who have invested their time and effort with us to make us aware of the current situation and existing constraints!

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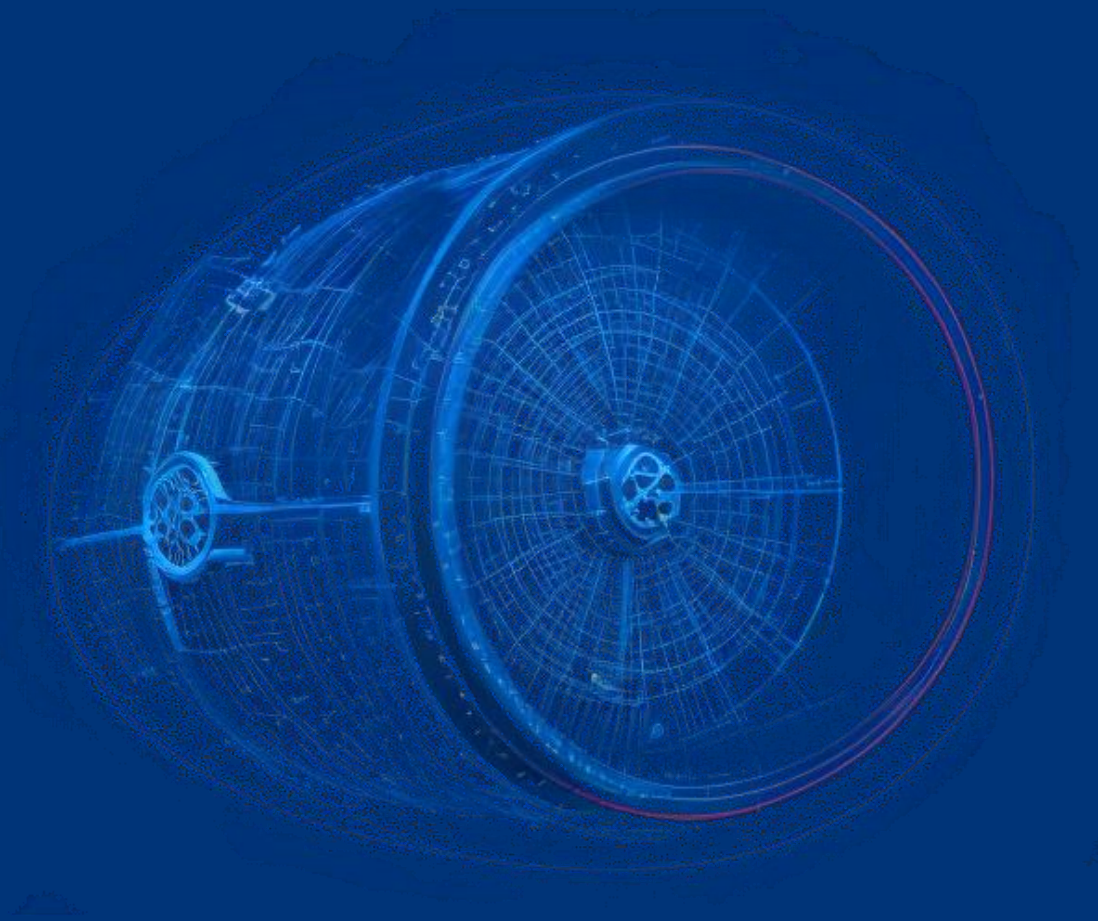
CASE STUDY #4

DIGITAL FUEL MANAGEMENT



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THE FUTURE TO COME...

Climate-neutral by 2050 under European Green Deal & 90% reduced transport-related emissions

35% use of Sustainable Aviation Fuels (SAF) and 35% synthetic SAF to reduce the aviation carbon footprint

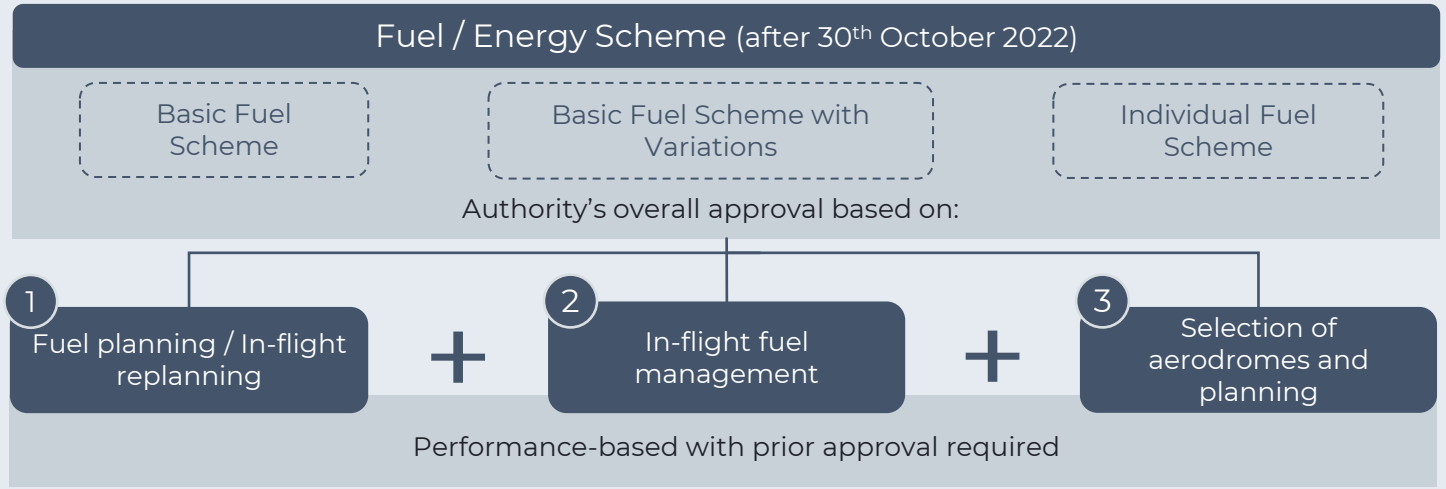
Reduce conventional aviation fuel environmental impact through the progressive implementation of fuel reduction schemes

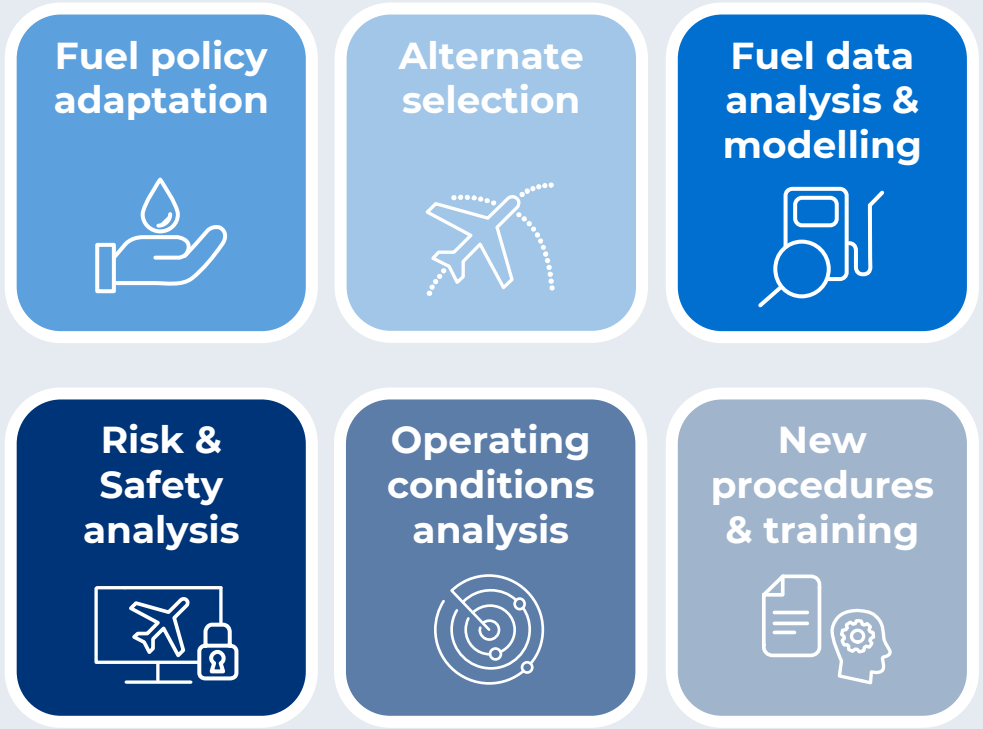
STATUS & MATURITY

New fuel regulations, in effect for **a year**, have sparked a revolution in the aviation industry. Many operators have already taken the leap, adopting **Basic Fuel Schemes with Variations**.

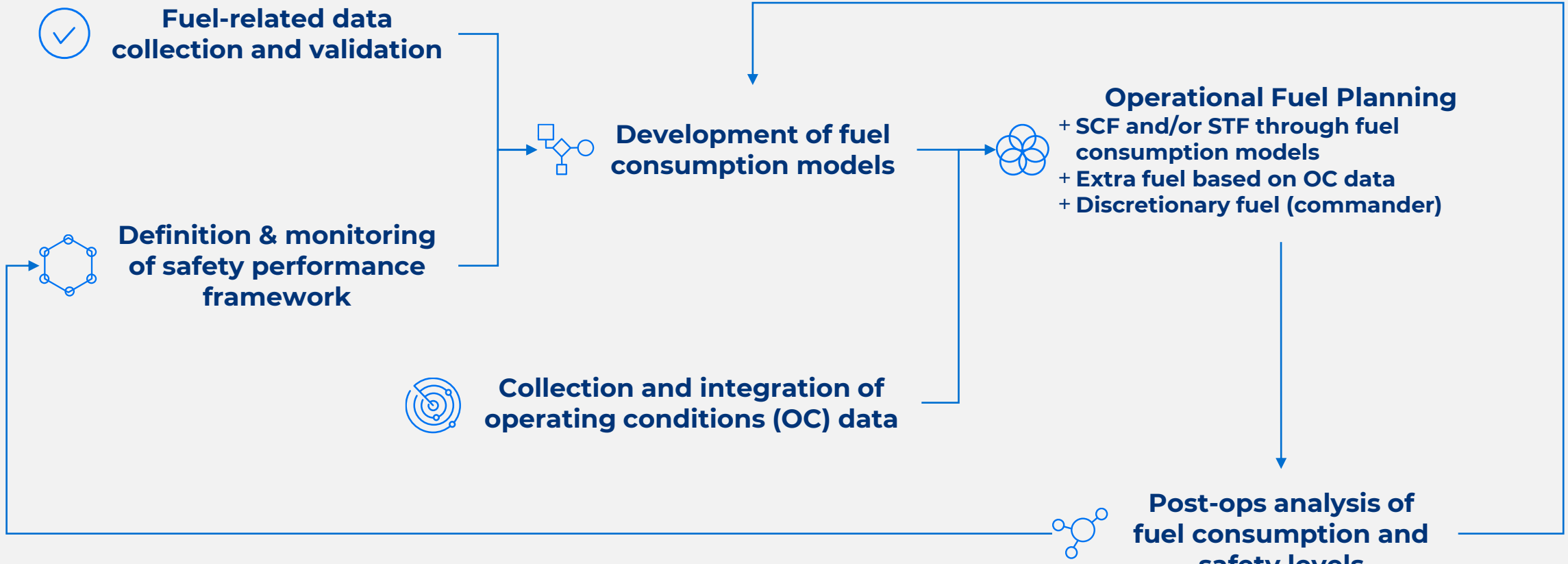
Now, there's **willingness to embrace the next level** through Individual Fuel Schemes, but...

... the adoption of these advanced schemes brings a **set of challenges that need to be addressed.**





...EMBRACING DATA USAGE FOR FUEL SCHEME ADOPTION



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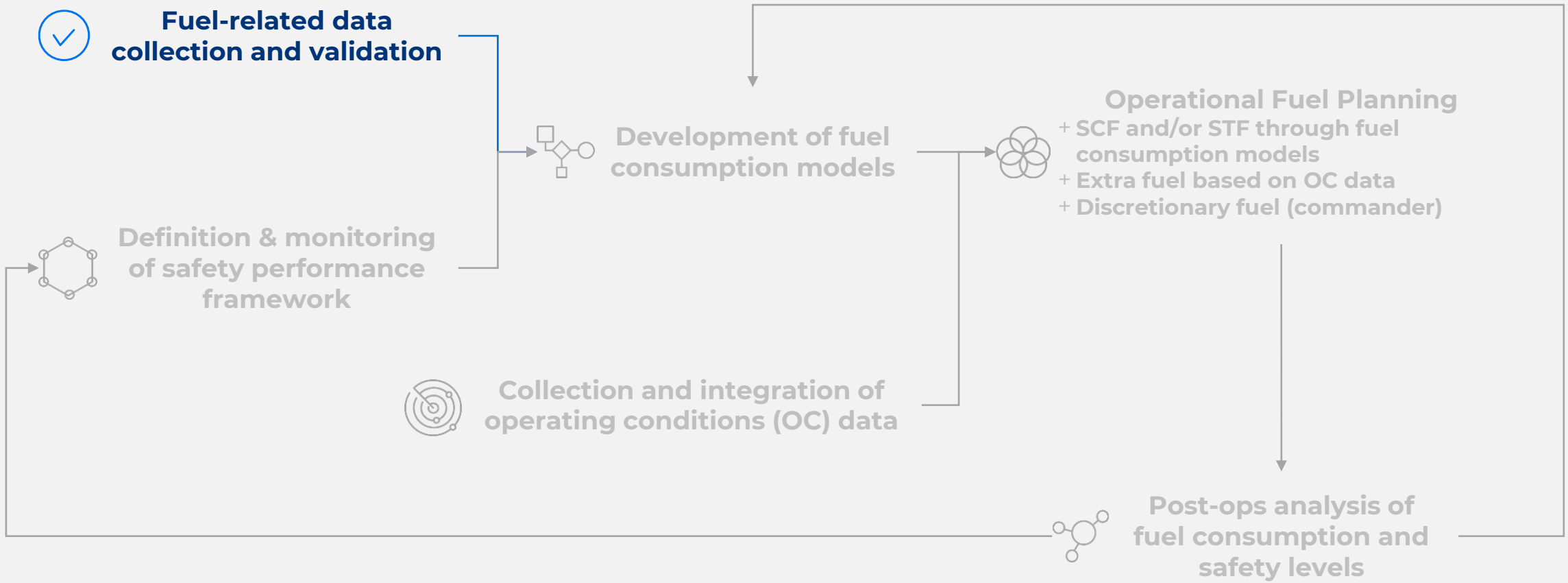

Fuel-related data collection and validation
Development of fuel consumption models
Operational Fuel Planning
+ SCF and/or STF through fuel consumption models
+ Extra fuel based on OC data
+ Discretionary fuel (commander)
Definition & monitoring of safety performance framework
Collection and integration of operating conditions (OC) data
Post-ops analysis of fuel consumption and safety levels

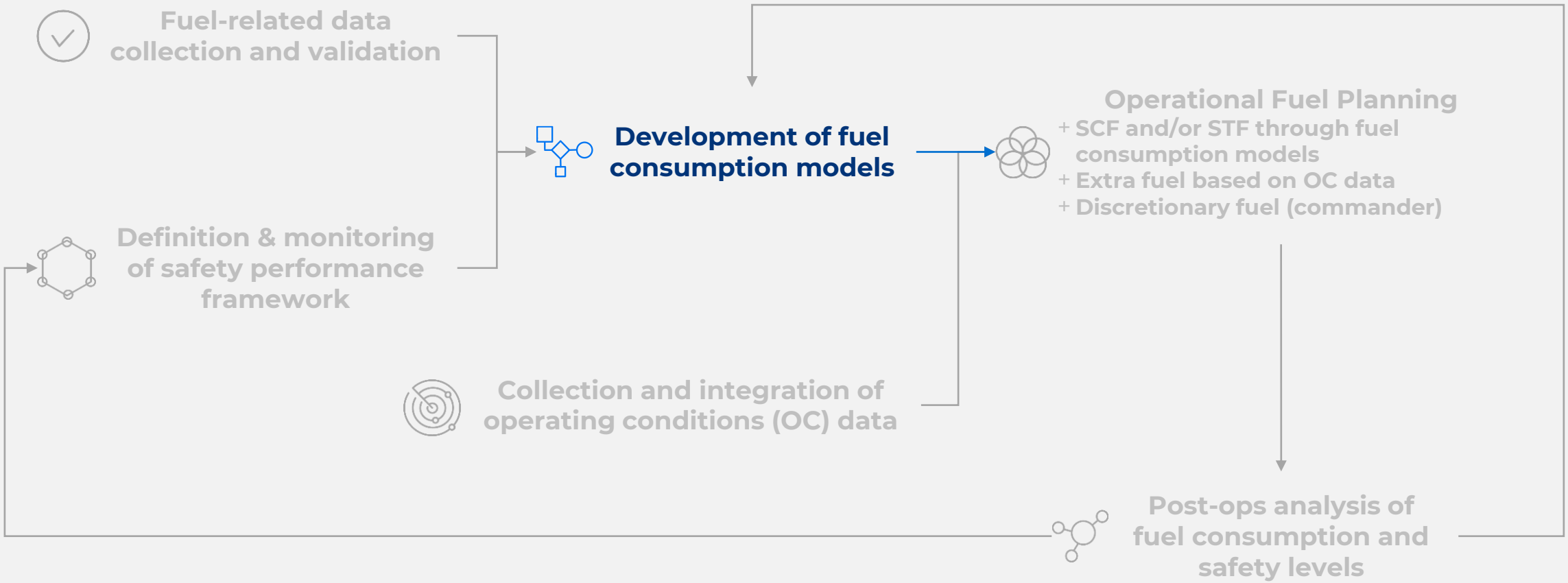
FUEL-RELATED DATA COLLECTION & VALIDATION

LIMITATIONS

1. Selection of fuel-related data sources
2. Definition of relevant fuel data to be recorded
3. Assessment of fuel-related data quality

PROPOSED SOLUTIONS

- GM/AMC for **minimum requirements** and **selection criteria** of fuel-related data sources
- GM/AMC for the **alignment of FDM and fuel schemes regulatory** requirements
- Best-practices for the definition of a comprehensive **fuel data framework**
- GM/AMC for **data validation** methodologies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FUEL CONSUMPTION MODELS

LIMITATIONS

1. Standardised models for reductions
2. Definition of statistically relevant set of data
3. Capitalisation of knowledge for fuel estimations and predictions
4. Validation and deployment of models into daily operations

PROPOSED SOLUTIONS

- GM/AMC that establish a **standardised** framework for **statistical fuel consumption models**
- GM/AMC specifying what constitutes **statistically relevant data**
- Best-practices for **data sharing** and collaboration among operators
- GM/AMC capturing the need for **transparency** in algorithm details provided by vendors
- Best-practices for the **validation and deployment** of fuel-related models

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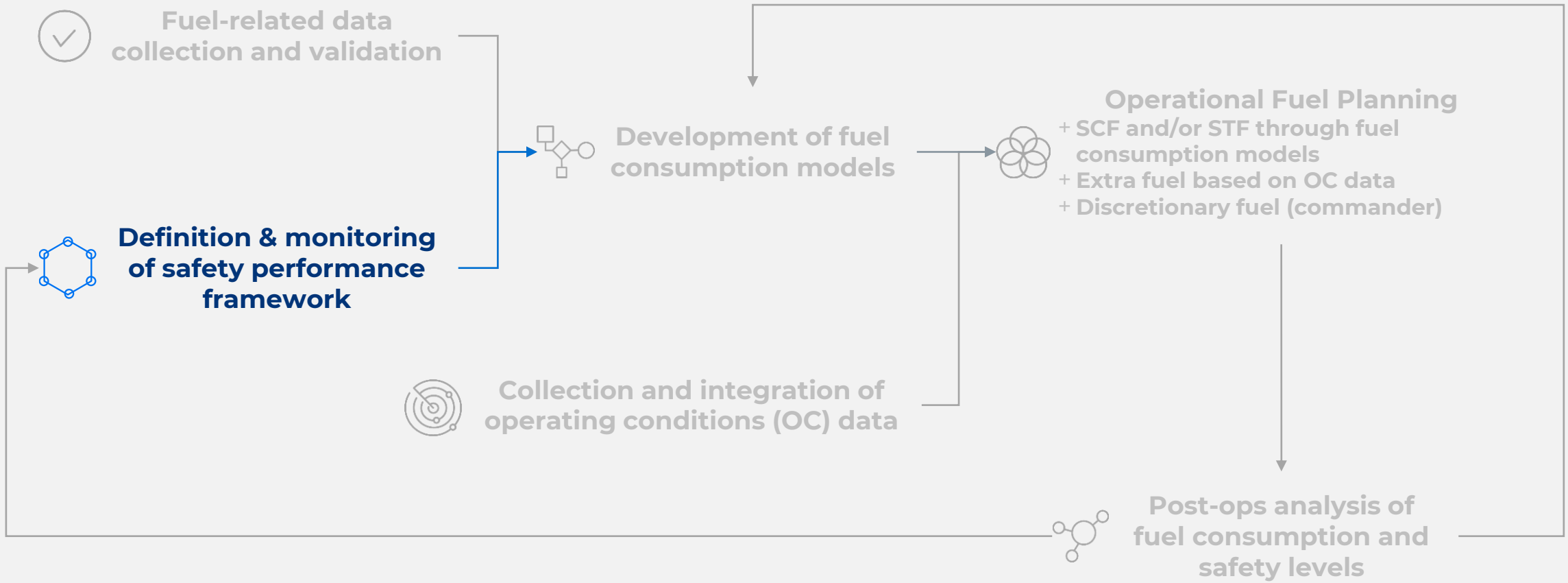
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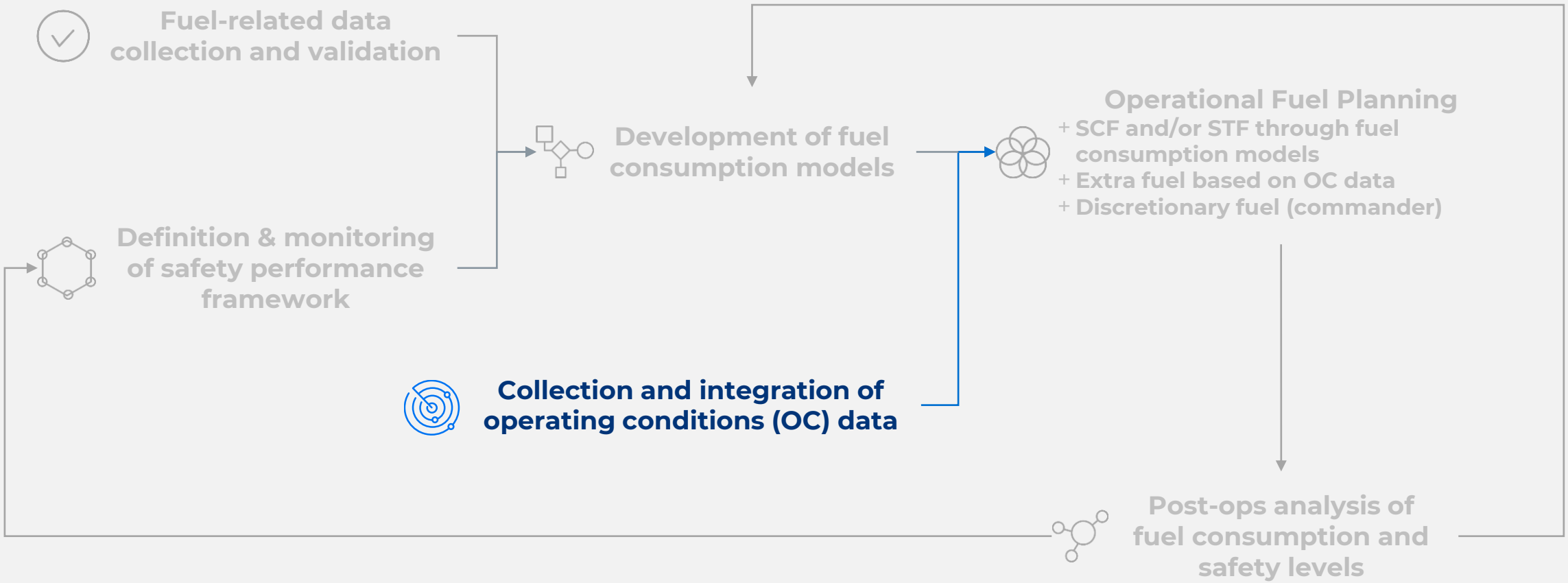
DEFINITION OF SAFETY FRAMEWORKS

LIMITATIONS

1. Framework for the definition of SPIs
2. Continuous monitoring and reporting of fuel and safety
3. Change management – fuel within SMS/FDM

PROPOSED SOLUTIONS

- GM/AMC for the definition of **standardised SPIs frameworks** specific to fuel reductions
- **Collaborative data programmes** for the definition and monitoring of safety frameworks
- GM/AMC for the continuous **monitoring and reporting** of fuel-related safety performance
- GM/AMC for the alignment of fuel initiatives with **Safety Management System**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COLLECTION & INTEGRATION OF OPERATING CONDITIONS DATA

LIMITATIONS

1. Reliability of operating conditions data sources
2. Consistency of data along fuel management
3. Governance of operating conditions data sources

PROPOSED SOLUTIONS

- GM/AMC for **minimum requirements** for operating conditions data & its integration
- Best-practices for the **use and monitoring** of operating conditions data
- Development of **centralised platforms**

TIME TO ADJUST THE
REGULATORY FRAMEWORK

WHAT'S NEXT?

Now, our research will focus on the identification of regulatory materials and standards modifications needed to fill the existing regulatory gaps.

Afterwards, the final objective will be to develop the roadmap for smoothing the route to achieving regulatory change and to develop a detailed solution.

1 **Identify regulatory** materials and standards **modifications**

2 **Develop the roadmap** for smoothing **regulatory change**

3 **Develop a detailed solution** for the case study

QUESTIONS & ANSWERS

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ABOUT US

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About Us

ALG AT A GLANCE

Global strategy and business consulting firm specialized in logistics, infrastructure and transportation with 25+ years in the business

Aviation

We provide in-depth knowledge of the industry (air transport, airport infrastructure, air navigation, UTM and drones, space and civil aviation

Maritime

We identify opportunities to take advantages of trends in global trade, cruise markets and marina concessions, and support the development of maritime transportation and infrastructure throughout the value chain

Land

Leading players in the highway and railway sectors and public transport authorities trust us (the highest rate of client repetition) to achieve more efficient and sustainable transport

Intermodal & RE

We draw on our in-depth understanding of all modes of transport to assess and define the role of logistics zones in global supply chains and to design new strategies and modern logistics processes

OUR DIGITAL DEPARTMENT

Our team of hybrid profiles, supporting transportation organisations along their path towards digital transformation

WHAT DO WE OFFER?

- **Digital strategy**
- **Digital capabilities**
- **Digital technologies**

Introducing the panellists

OUR TEAM

Núria Alsina

Principal at ALG and head of digitalisation and advanced analytics in the Transportation practice. Aeronautical engineer with specialisation in air navigation and systems, certified in project management and scrum methodology

Antonio Cabeza

Engagement Manager at ALG. Aeronautical engineer with a MSc in Big Data and Advanced analytics. Specialises in strategical projects in airport and air traffic operations with wide expertise in digitalisation and regulatory related projects

Andrada Bujor

Team Leader at ALG. Aeronautical engineer with a MSc in Business Intelligence and Big Data and expertise in strategic business projects, ATM research, impact assessment and digital initiatives mainly in the European context

Anna Feliubadaló

Consultant at ALG. Aeronautical engineer with relevant expertise in Advanced Analytics, ETL operations and Business Intelligence

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THANK YOU!

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