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ITAPA Phase 2: Integrating UK Tools for Air Pollution Assessment



Overview

- Air pollution and risk assessment for ecosystems
- Current tools and approaches
- Learning from the Dutch Approach
- The case for integrated tools
 - User needs
 - Options evaluation
 - Current caselaw
- Project plan overview
- Discussion

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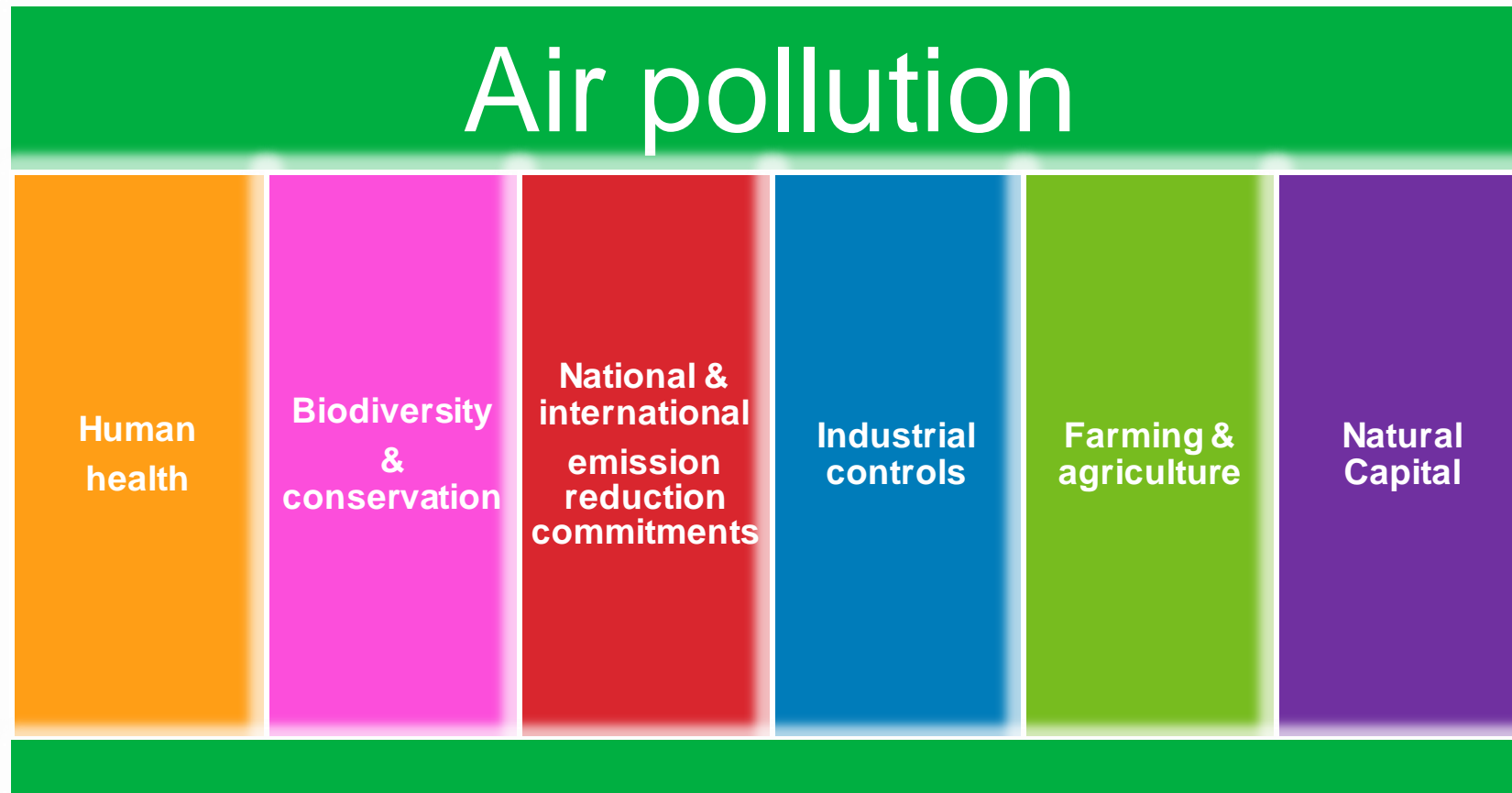
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Your thoughts....

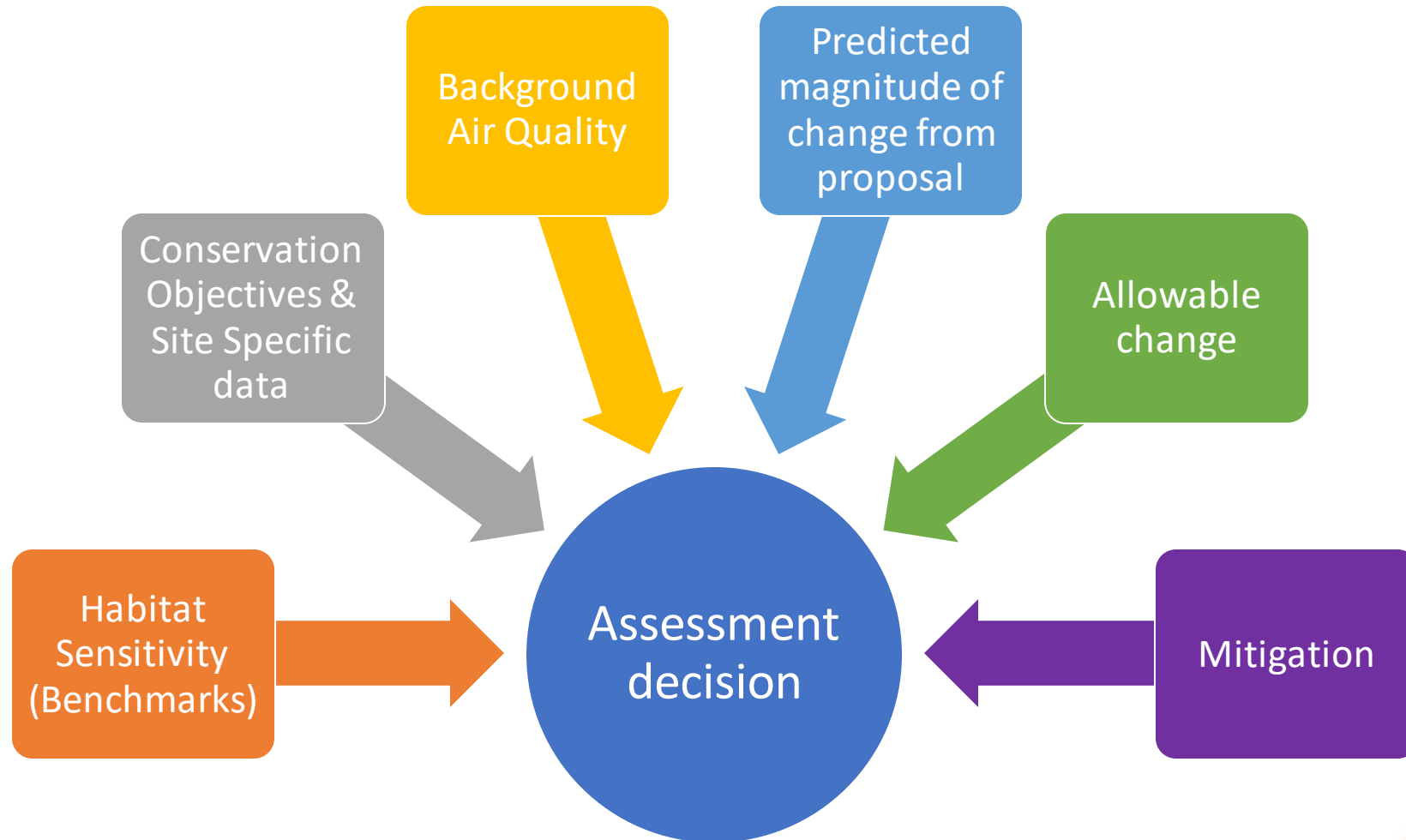
Modelling
Local
Government
Regulator
Project
Emission
National
NGO
Conservation
Policy
Applicant
Plan
Regional
Consultant
Assessment

WordItOut

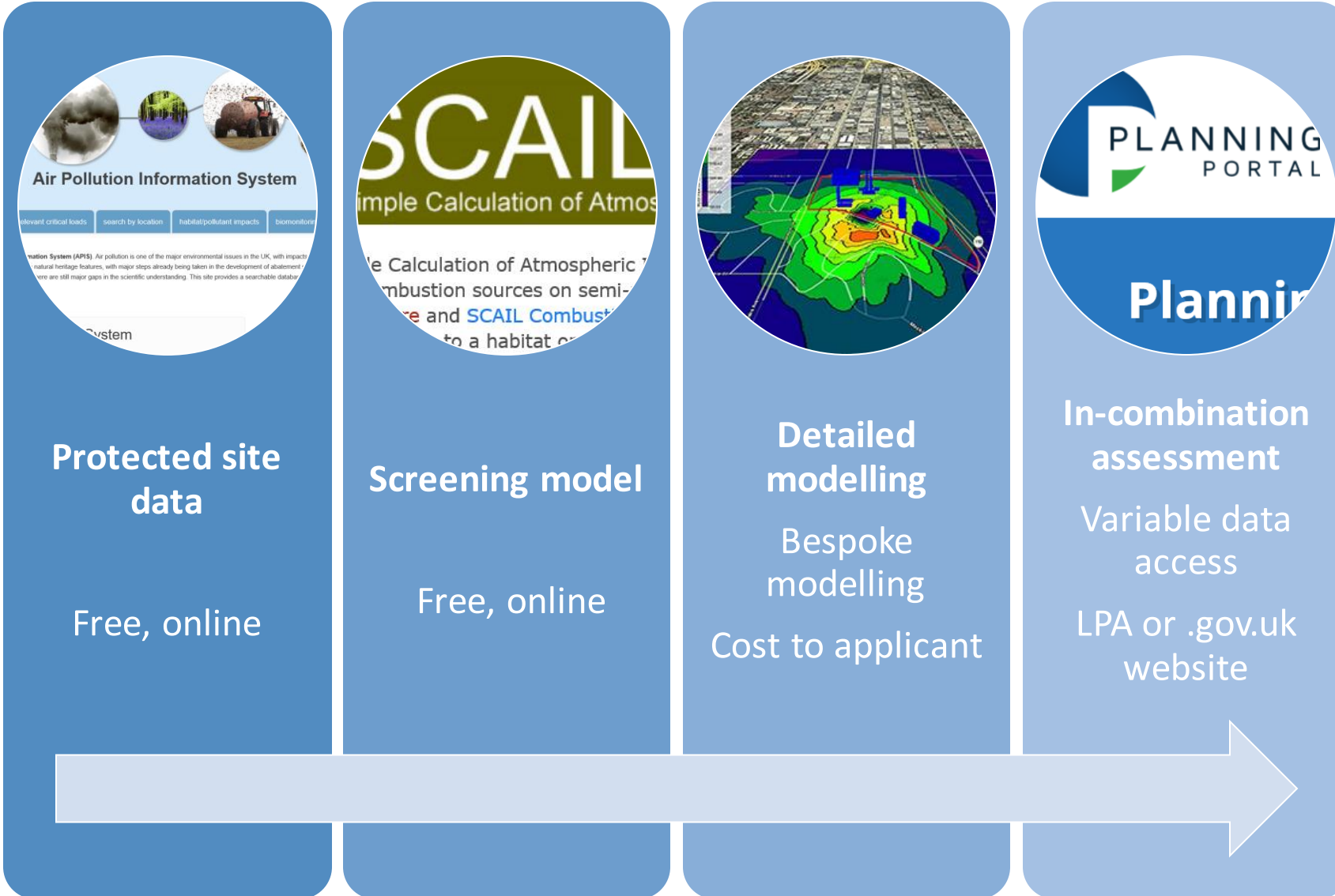
Air pollution and policy



Air pollution and ecological risk assessment



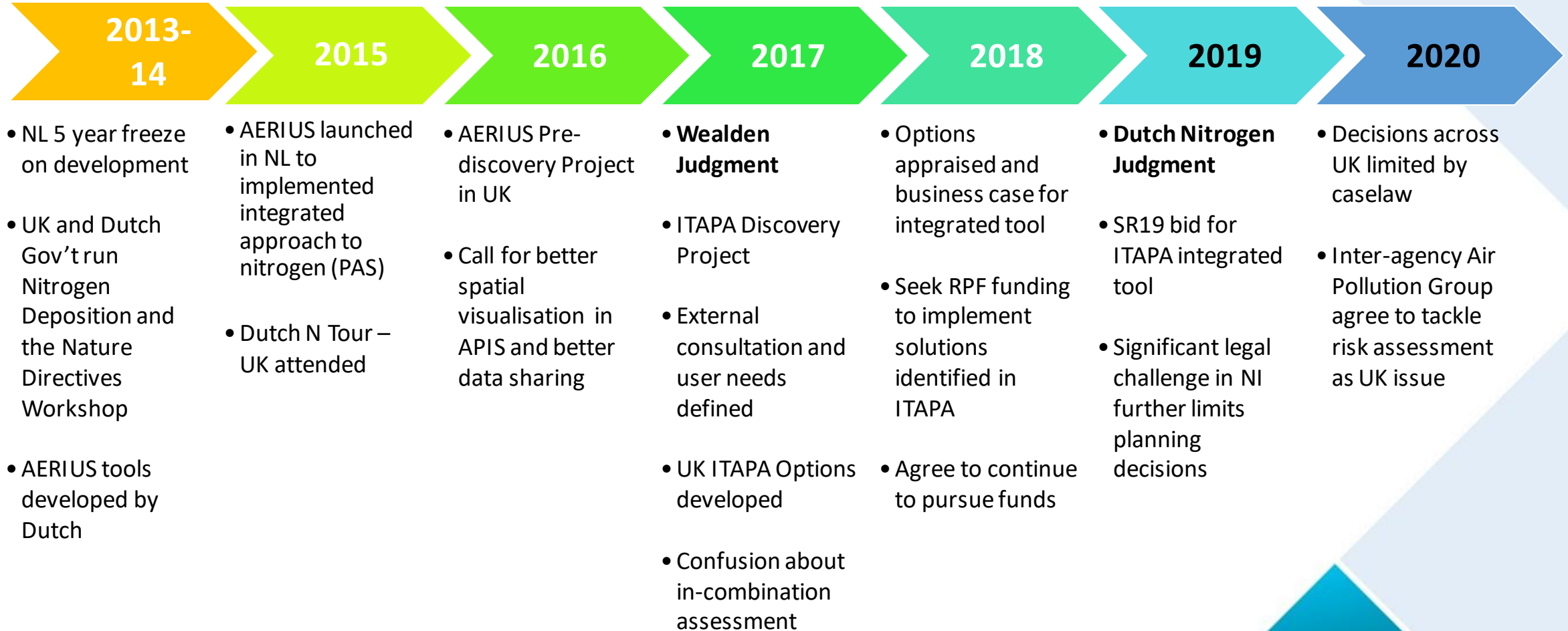
Current tools and data



Current UK risk assessment

- Data is held in several locations
 - Air Pollution Information System
 - SCAIL – Simple Calculator for Atmospheric Impact Limits
 - Detailed modelling in individual applications
- Divergent interpretation of the same evidence in UK countries
- Confusing for applicants and can be costly
- Sometimes time-consuming for applicants, regulators and local authorities

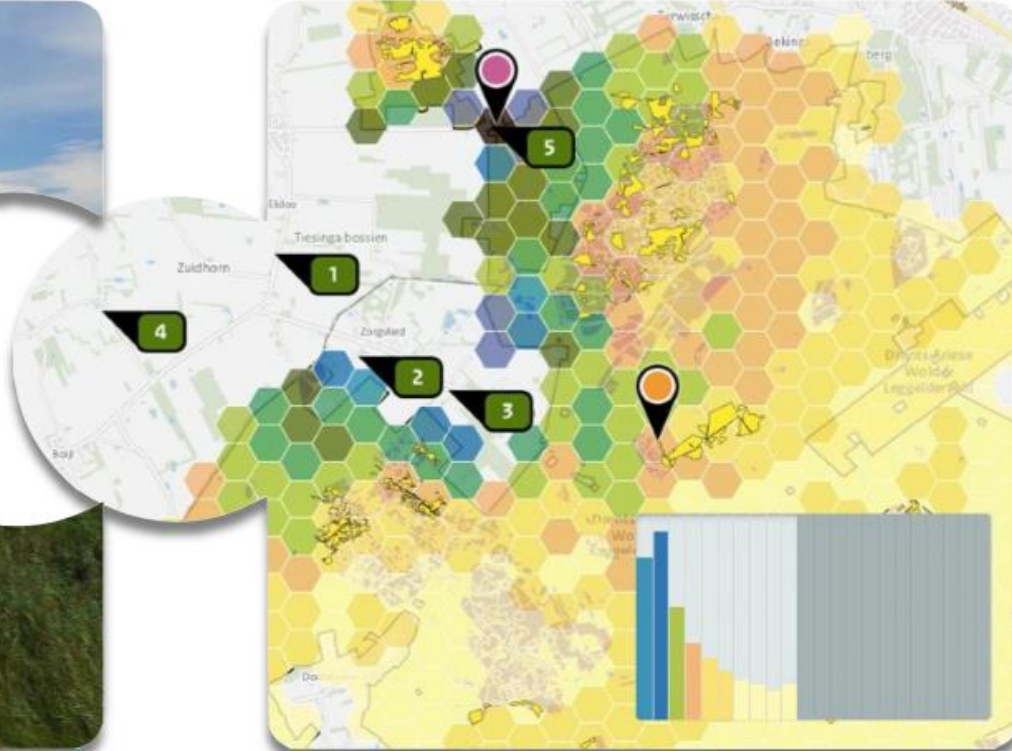
How the UK got to this point



Learning from the Dutch Integrated Approach to Nitrogen (PAS)

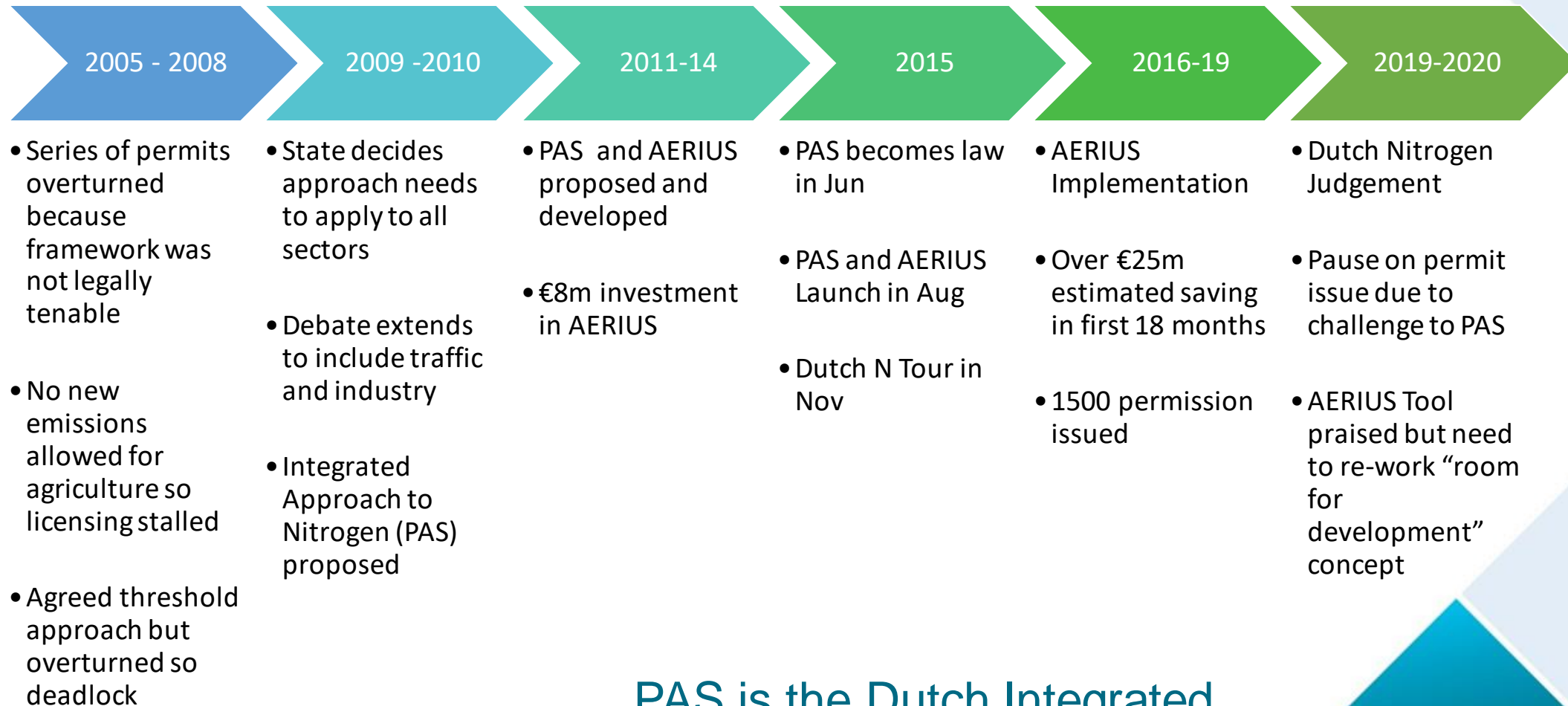


Ecological Restoration Measures



Assessment and monitoring using AERIUS

Why implement the PAS?



PAS is the Dutch Integrated Approach to Nitrogen

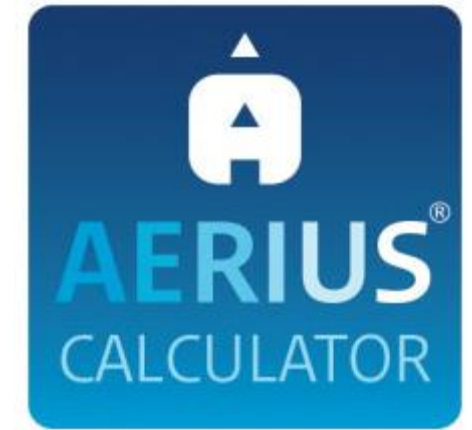
Aims of the PAS

PAS is the Dutch integrated approach to nitrogen

Aim: Achieve objectives for Natura 2000, while creating the necessary room for economic development.

Two overarching strategies:

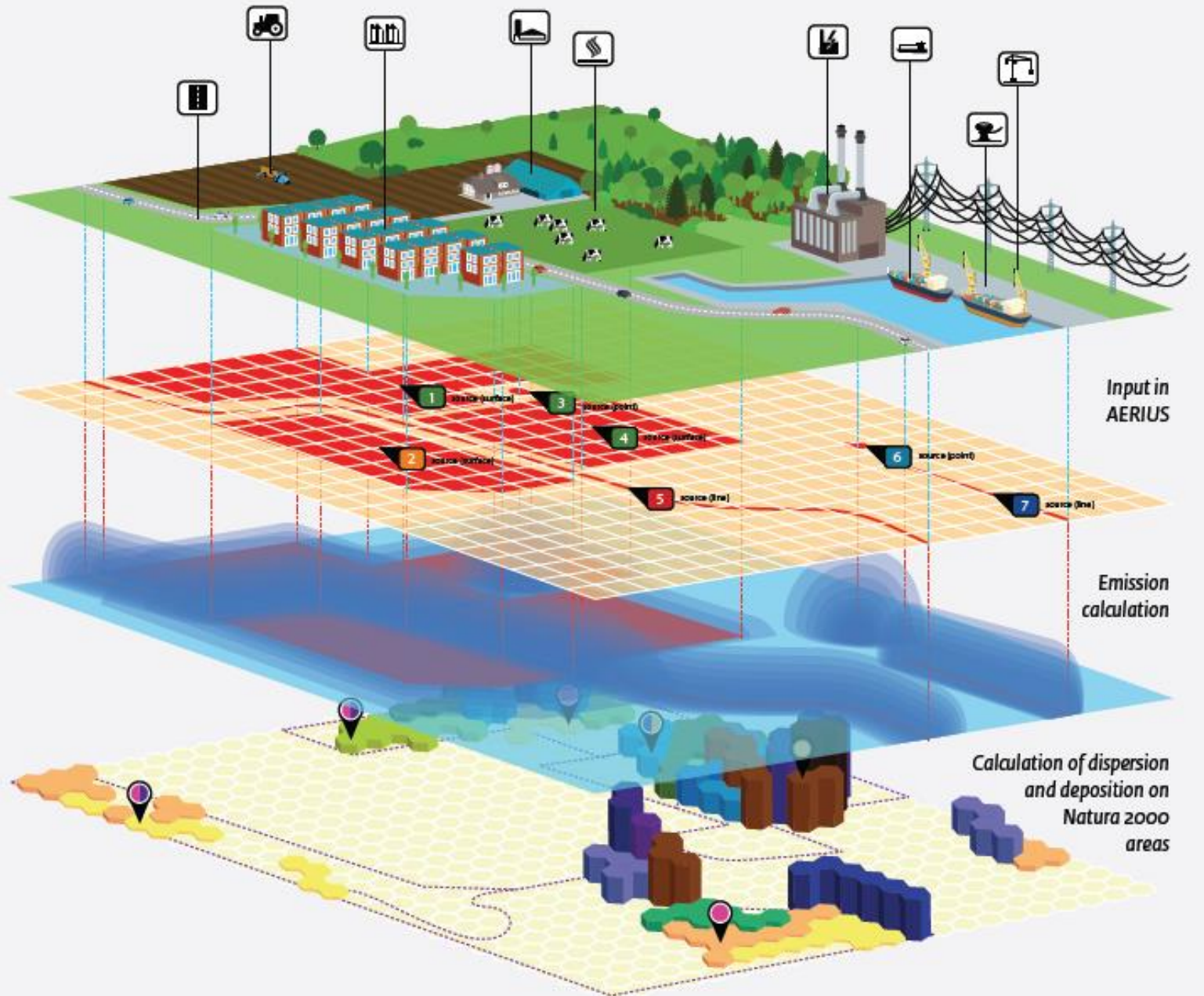
- reducing **nitrogen deposition**, whilst allowing economic development (room for development)
- implementing **ecological restoration** measures



AERIUS provides a **free, simple and clear permit process** for developers and decision-makers which **reduced costs** and **streamlined sustainable development**.

AERIUS Overview

- Open source, free and online
- Multiple pollutants
- Mapping interface
- Tests emission reduction options
- Dispersion model
- Protected site/habitat data
- Provides data for permit issue



Scope of AERIUS



Issuing permits
managing available
development room

Analysis of actual deposition
and trends. Asses amount
of development room



Reduction of
Nitrogen deposition



Connect via webservice
or provide manual input



Permit Request Calculation

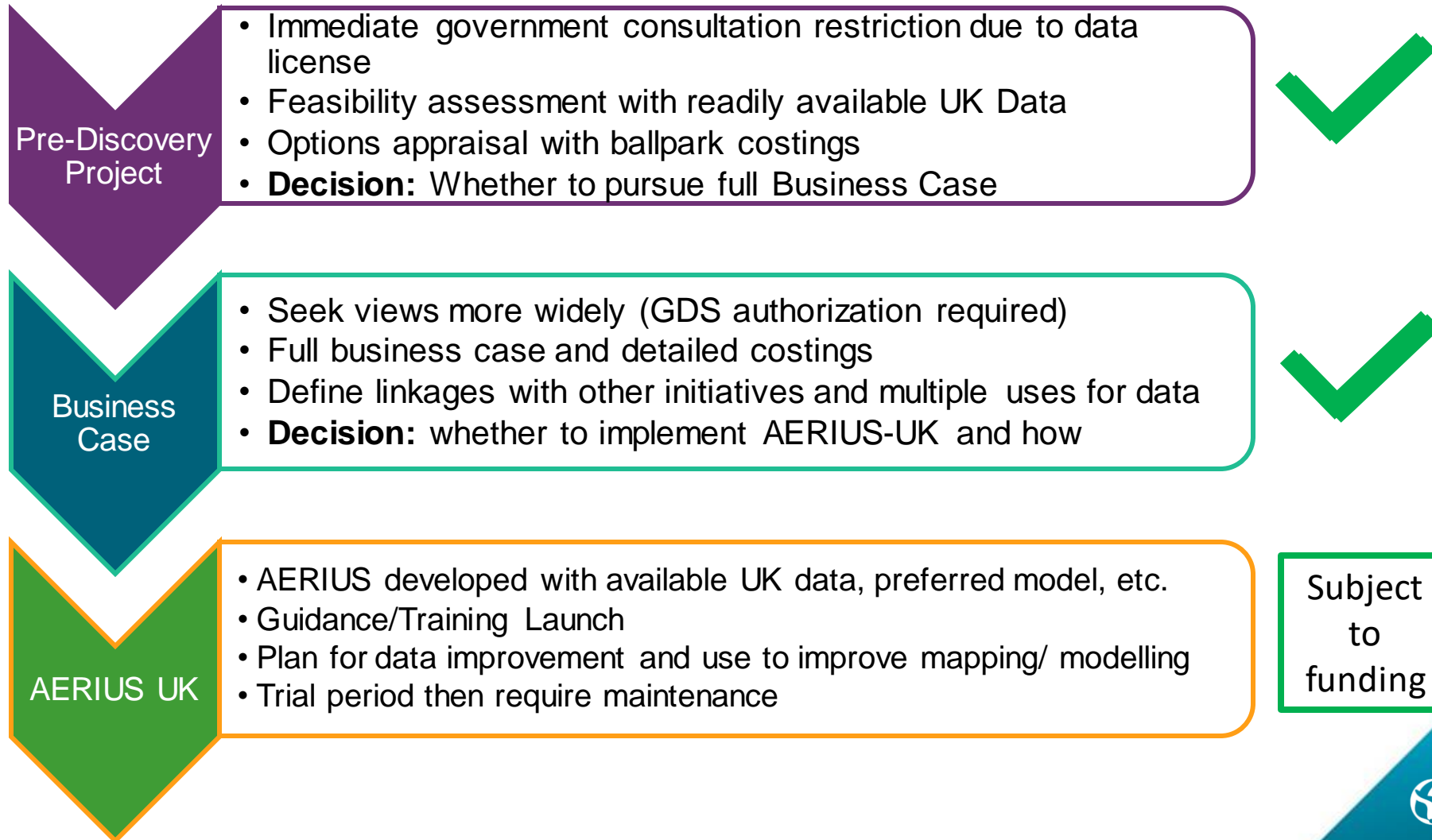
AERIUS Modules

- **Calculator** – Dutch detailed modelling tool (eg advanced SCAIL/AST)
- **Register** - system to submit applications, issue and record permits
- **Monitor** - manages deposition/ reports trends, permit accounting and Dutch room for development
- **Scenario** - provides overview of deposition under different scenarios
- **Connect** – Chargeable service; network of people from government and industry
- **AERIUS Extra** - data management tool for large projects/business



Which tool is top priority for your work?

ITAPA so far



Technical Evaluation of AERIUS

Objectives

- Test data and technical requirements of AERIUS ✓
- Test effectiveness with more limited UK data (cf Netherlands) ✓
- Compare to existing tools and define benefits ✓
- Test potential for application in the UK ✓

and therefore...included as option to address user needs for air pollution assessment tools ✓

Stakeholder feedback (gov only)

- Positive reception 😊
- additional applications (eg National Inventory) 😊
- potential for integrating 😊

ITAPA Phase 1: Options evaluation

WP1: Team Assignment & Stakeholder Engagement Plan

WP2: General User Needs

Wide
consultation

User
stories

Agree
Themes

WP3: Evaluation by Theme

Technical
input

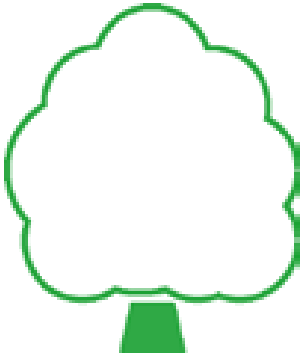
Theme-based
assessments

Options

WP4: Options Appraisal

WP5: Business Case and
Recommendation

ITAPA and policy objectives



- Nature Strategies
- Clean Air Strategies
- Food & Farming
- Sustainable development



Open
Data

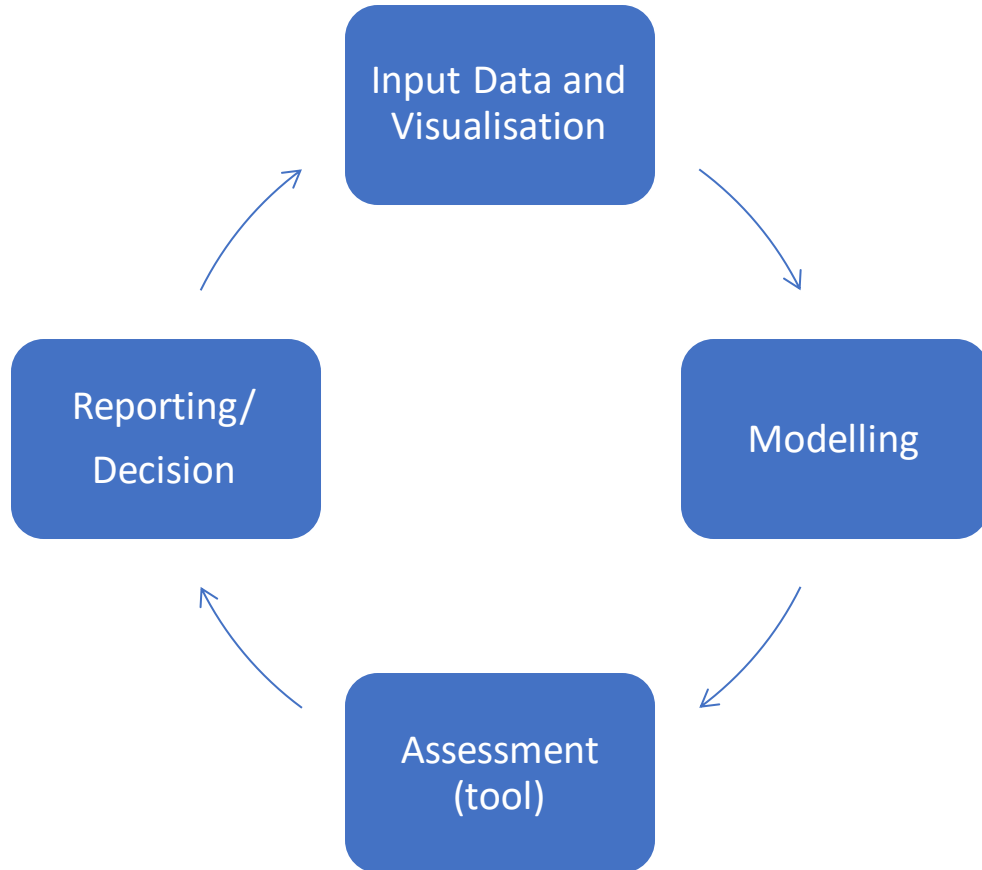


Cutting
Red Tape



Working
Internationally

Integrated tool



- Data is held in one place and accessible
- Easy to visualise
- Easy to test mitigation alternatives
- Aligned use of evidence
- Clear for applicants, advisers , regulators and local authorities

Driver for data improvement and open data used to improve national reporting and targeting

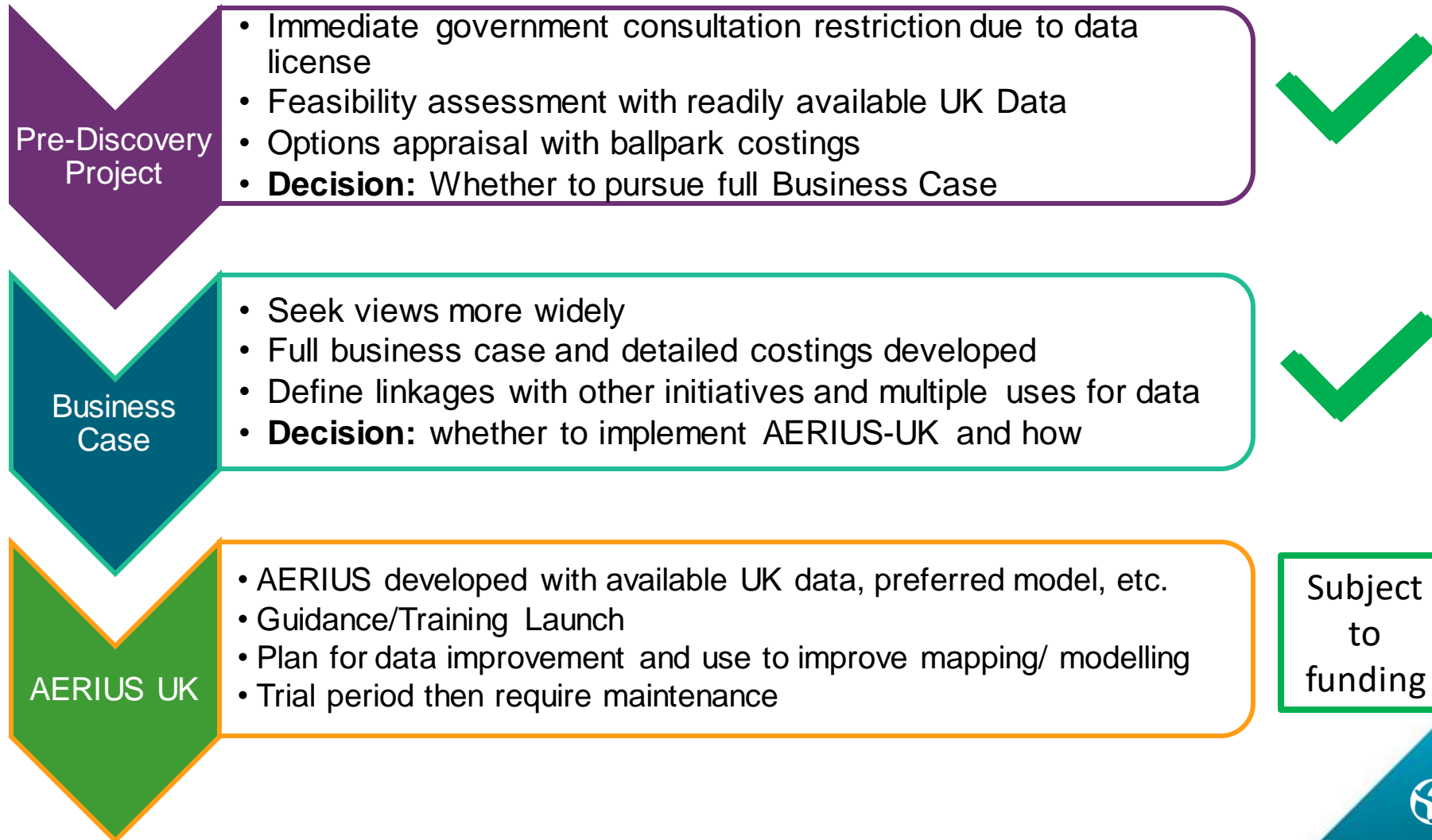
Stakeholder feedback (so far)

- Supportive but would need to plan resource to input to tool development
- Clear benefit of UK working and alignment where possible
- Needs rigorous testing against current detailed modelling
- Concern about having to choose one model
- Concern about having one mechanism to make a decision
- Clear streamlining for in-combination assessment
- Clear benefit for open data, data access and harmonising data

CONCLUSION:

Challenging to implement and will require **discussion** but **worth the effort**

ITAPA so far (re-cap)



Your thoughts....



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ITAPA Proposed Timing

Timing from start	Start	3 months	6 - 9 months	1 year	15 - 18 months
Increment	0	1	2-3	4	5-6
Milestones	Governance Structure Setup user groups Final detailed workplan	Stakeholder groups established Dataset collation Agree technical choices	Technical demonstration Guidance and training development	Quality assurance - Technical - User acceptance Development of final version for release	Prioritise future developments System maintenance Review and evaluation

- Increments of approximately 3 months
- Iterative and step-wise process
- Technical and policy workstreams

User needs and challenges



WordItOut

What do you
need and how
could ITAPA
help?

Towards integration



What concerns

User needs and challenges

monitoring different
Protect Enhance
process include emissions
HRA carry model
deposition
Conservation
local Decision
modelling impacts

What do you
need and how
could ITAPA
help?

!

JNCC

ITAPA and current projects

- Open Data and digitisation of permitting/decision making
- Data improvements - habitat mapping, satellite data/monitoring, data integration
- Integrated working
 - Farm activity data (national atmospheric emissions inventory)
 - Habitat condition data held in one place
 - NECD reporting and monitoring repository
 - MET Office Integrated Modelling Project

What are you aware of that the ITAPA Project Plan should account for?

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