



Air Quality Services for a cleaner air in Cyprus (AQ-SERVE)



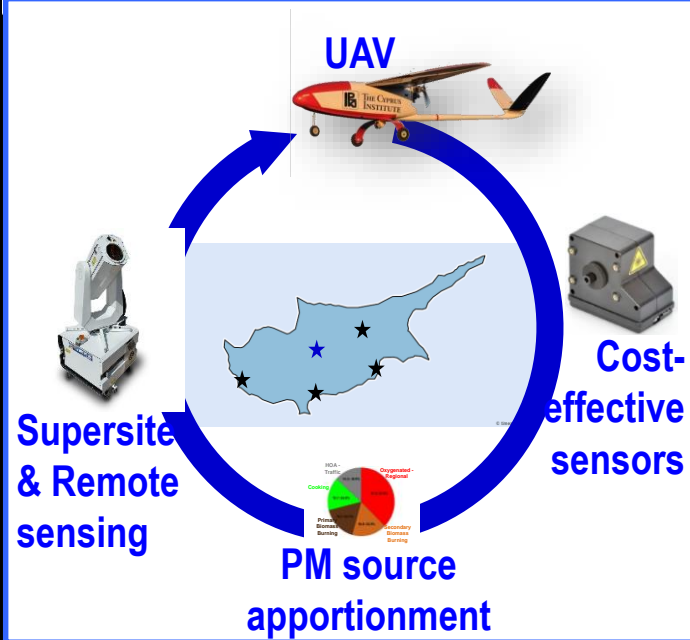
General Objectives:

- **AQ-SERVE will combine innovative technical developments with new scientific knowledge on the characterization and prediction of air quality in order to provide the first-ever evaluation of the health impact and risk assessment of air pollution in Cyprus. Different scenarios (abatement measures) will be tested in a coupled Air Quality/Health & Risk model with the objective to define efficient mitigation measures which can be translated to the public authorities (National Air Quality Action Plan).**

AN **INTEGRATED** STRATEGY

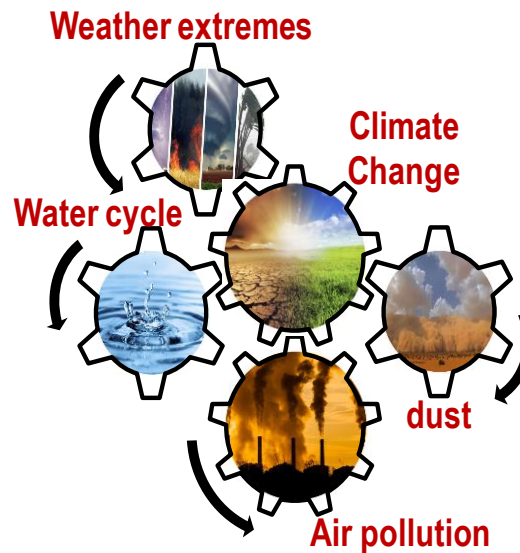
WP1: Project Management
WP2: Dissemination activities

We will
OBSERVE
the Atmosphere



WP3: UAV
WP4: Cost-effective sensors
WP5: PM source apportionment
WP6: Supersite & Remote sensing

We will
MODEL
processes & interactions



WP7: Data Centre
WP8: AQ model

We will assess
IMPACTS
for better Mitigation,
Adaptation, Policy



Health

Water Resources



Ecosystem Agriculture

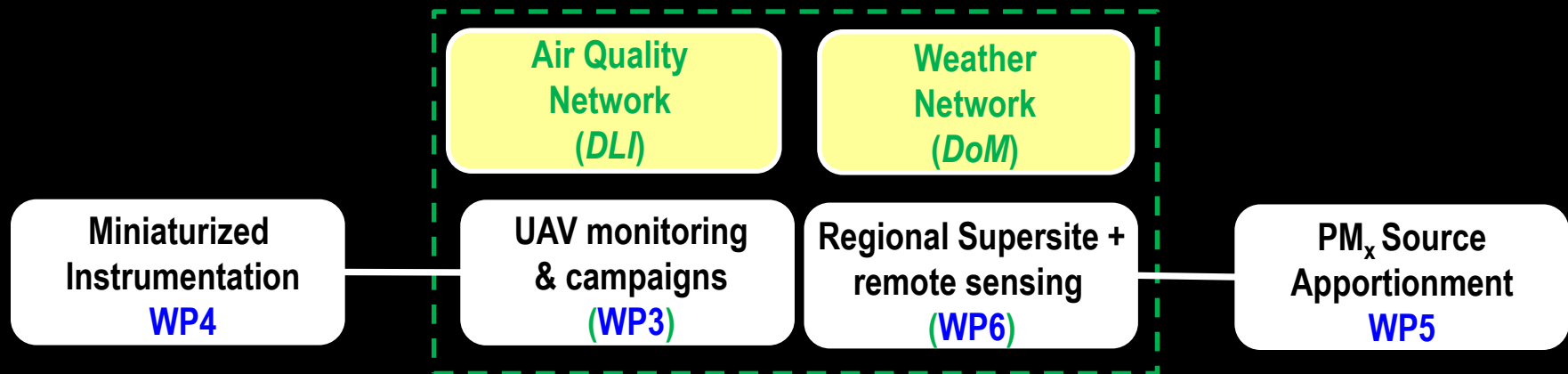


Renewable Energy



WP9: Health Impact & Risk Assessment

AN INTEGRATED CYPRUS ATMOSPHERIC OBSERVATORY



✓ Characterize Local vs Long-range transported Air pollution

(WP3, WP4), D6, D15, D16, D17

✓ Identify Anthropogenic vs Natural sources

(WP5, WP6), D7, D12, D13, D14, D18

OBSERVATIONS

MODELS

IMPACTS

AN INTEGRATED CHAIN OF KNOWLEDGE

CYPRUS ATMOSPHERIC OBSERVATORY

Air Quality
Network
(DLI)

UAV monitoring
& campaigns
(WP3)

PM, Source
Apportionment
(WP5)

Weather
Network
(DoM)

Miniaturized
Instrumentation
(WP4)

Regional Supersite +
remote sensing
(WP6)

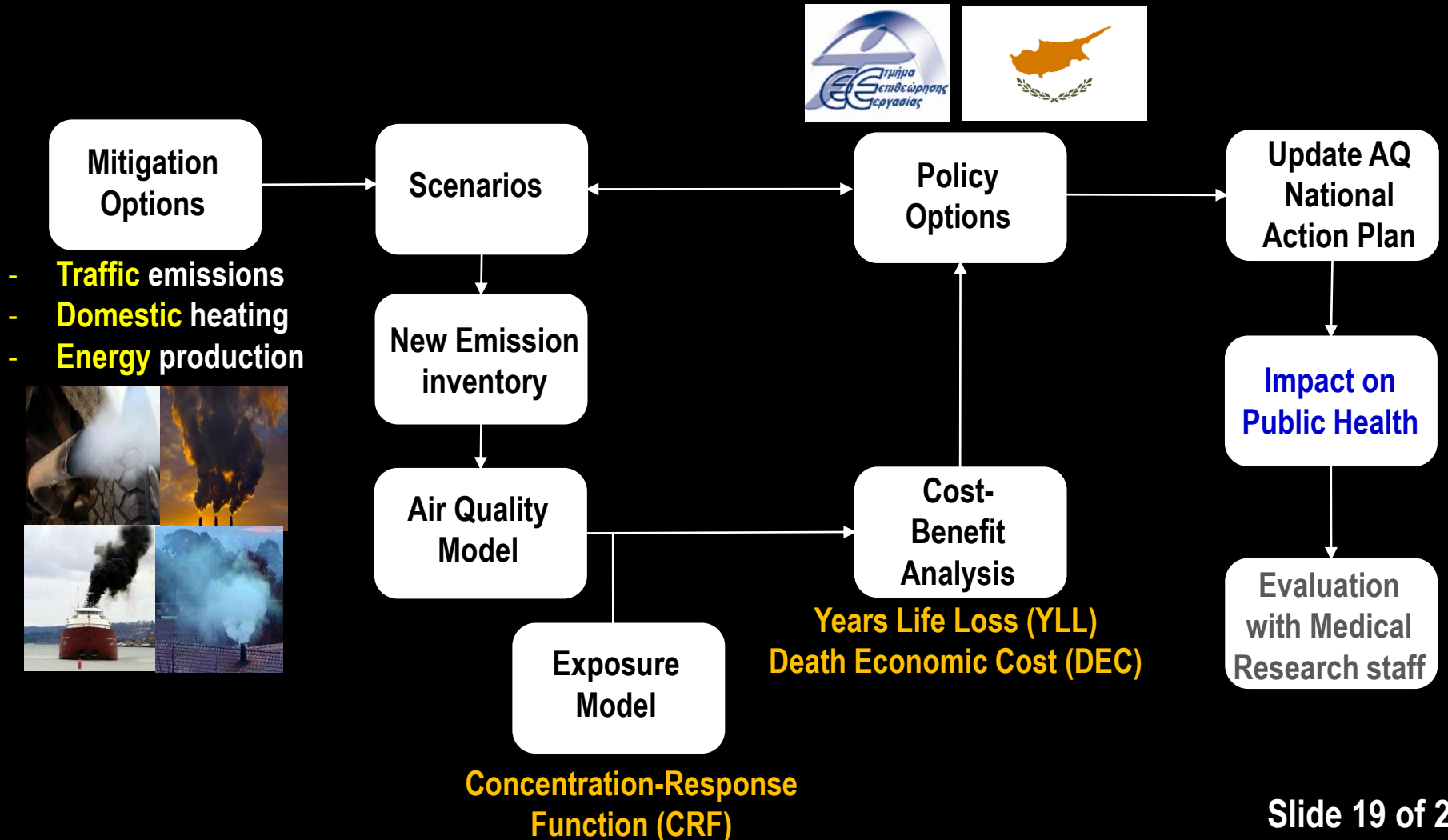
Cyprus Central AQ
data management
system **WP7**

AQ Modelling
WP8

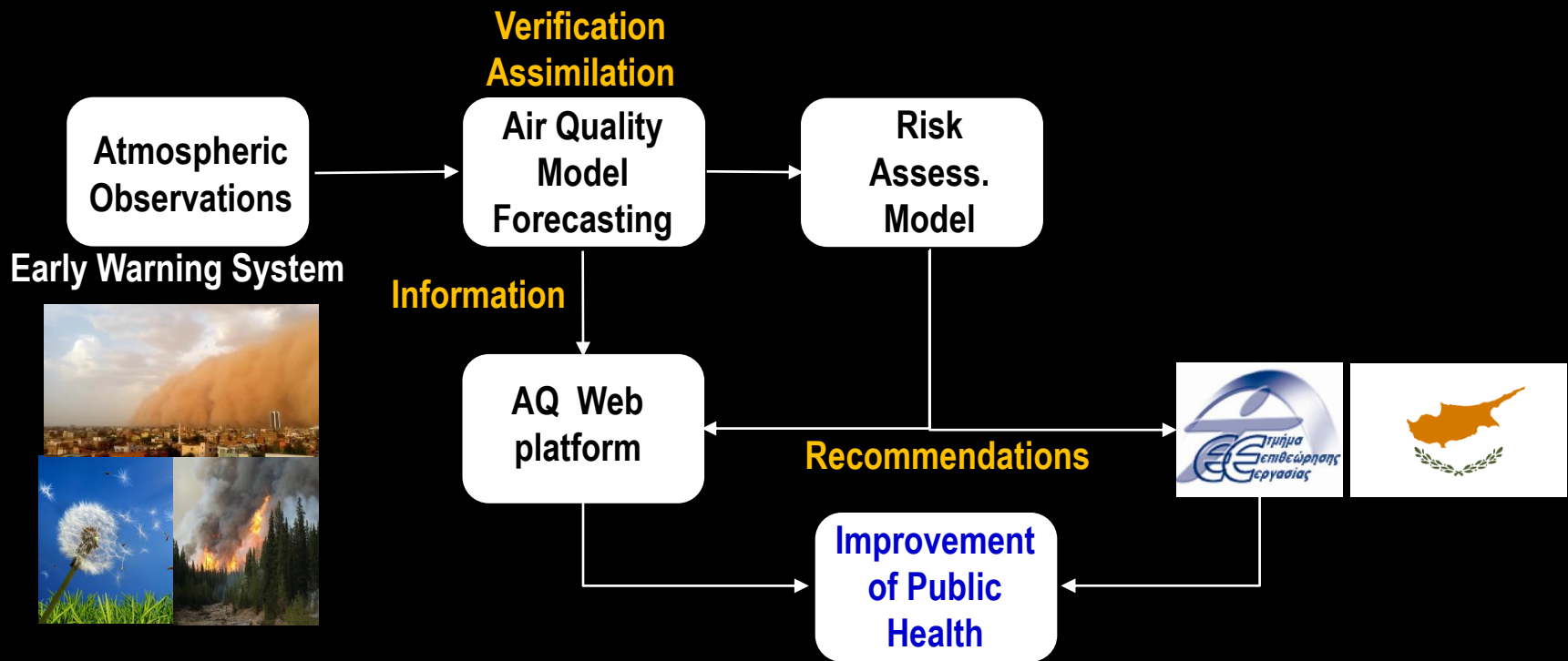
Health Impact &
Risk Assessment
WP9

- ✓ Build a unique (Open Access) **Atmospheric database & services** (WP7), **D19, D20**
- ✓ Provide high-resolution **Emission inventory & AQ forecast** (WP8), **D21, D22**
- ✓ **Assess Health Impacts** (Mitigation & Adaptation) (WP9), **D21, D22**

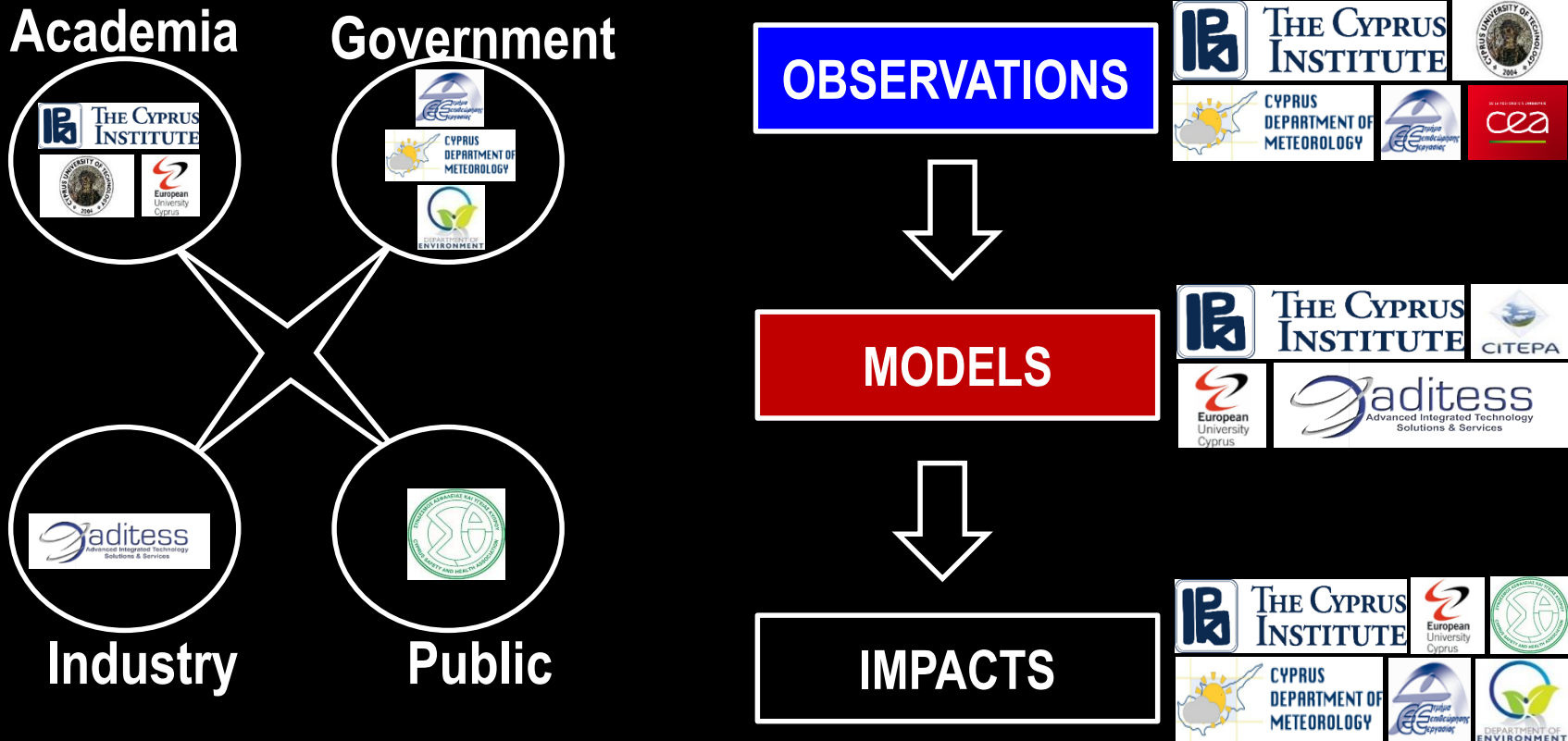
AN **INTEGRATED** HEALTH IMPACT ASSESMENT (1/2): MITIGATION OPTIONS to reduce Anthropogenic emissions



AN **INTEGRATED** HEALTH IMPACT ASSESMENT (2/2): ADAPTATION MEASURES to reduce exposure to Natural sources

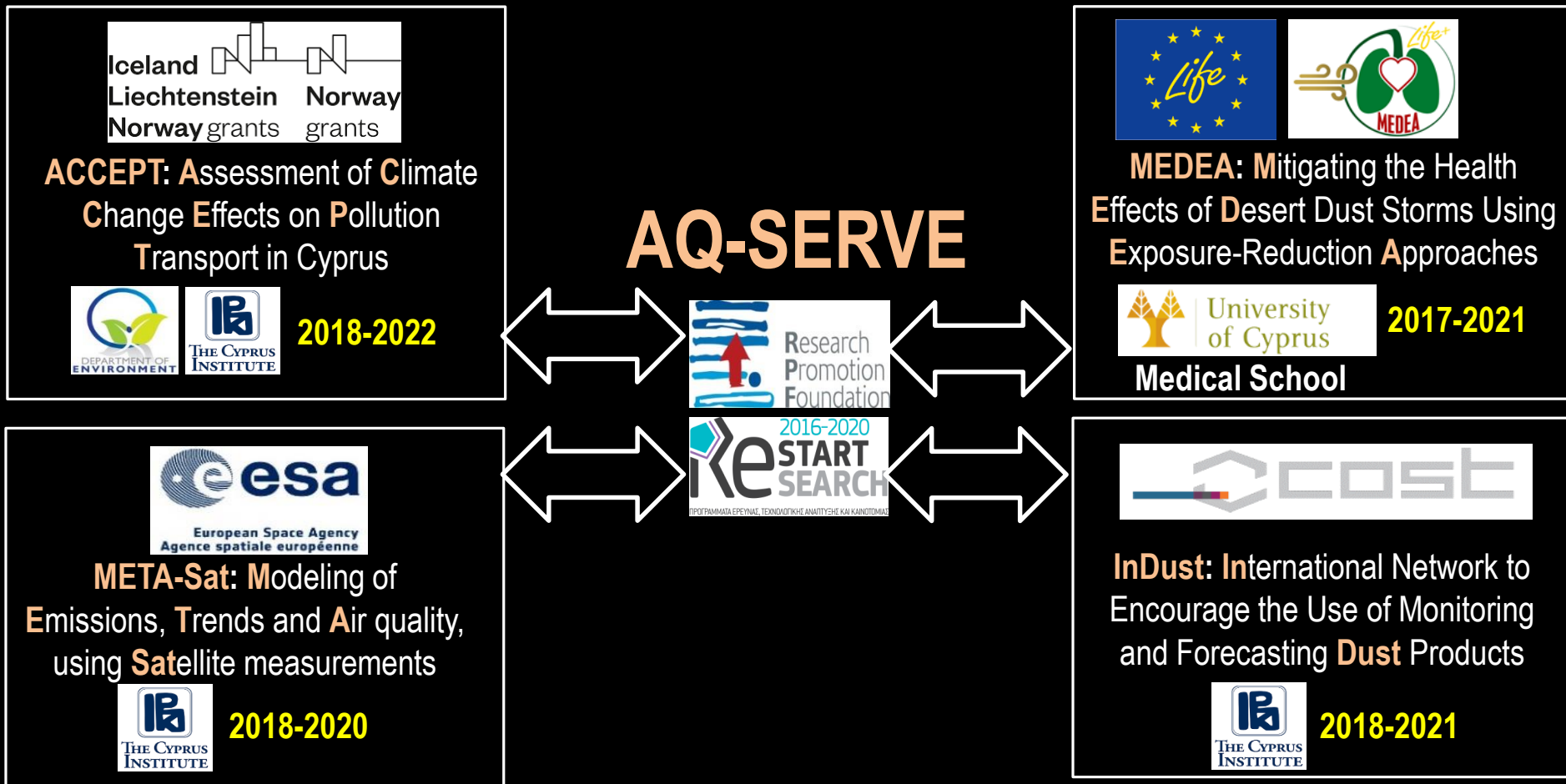


Mobilization of a large consortium (**Quadruple Helix**) with **clear roles & long-term past collaboration**



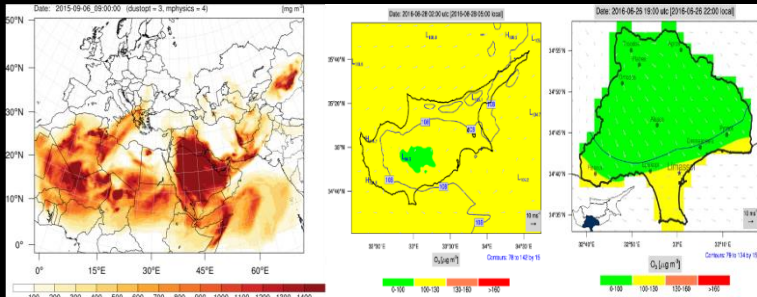
➔ Engagement of ALL key partners/experts at national level

Synergies & Leveraging new Research projects



⇒ **AQ-SERVE will be fostered by leveraging outputs of new research projects (lower risk in terms of work load)**

PRODUCTS & SERVICES for more sustainability

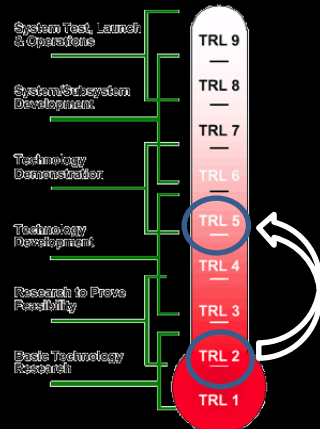
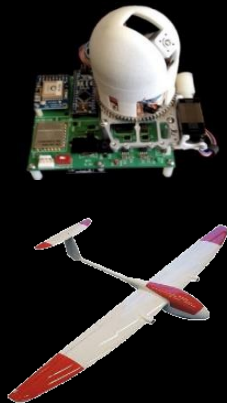


Air quality forecasting products

- Events, Tourism
- Renewable Energy Production
- Agriculture

Chemical Analyses of ultra-trace

- Environment (EU directives)
- Industry



Atmospheric Sensors & UAVs

- Indoor/Outdoor AQ
- Occupational Health

DISSEMINATION

YEAR 2019 **Air Quality Services in a Changing Climate
(19.03.2019) – AQ-SERVE Info Day**

YEAR 2020 **Climate Change Conference**



Work Packages

Work Package Number	Work Package Title	Person-months	Start Date (project month)	End Date (project month)
WP1	Project Management	29	M1	M36
WP2	Dissemination Activities	51	M1	M36
WP 3	Unmanned Aerial Vehicles	69	M3	M30
WP4	Cost-effective Atmospheric Sensors	28	M1	M33
WP 5	PM Source Apportionment	46	M6	M27
WP 6	Regional Supersite and Remote Sensing	35	M1	M36
WP7	Cyprus Central AQ Data Management System	50	M3	M33
WP8	Air Quality model	38	M1	M33
WP9	Health impacts and Risk Assessment of particulate pollution	33	M12	M33

Work Packages

Work Package Number / Title	DURATION (Months)																																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
WP1. Project Management	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
WP2. Dissemination Activities	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
WP3. Unmanned Aerial Vehicles	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
WP4. Cost-effective Atmospheric Sensors	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
WP5. PM Source Apportionment	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
WP6. Regional Supersite and Remote Sensing	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
WP7. Cyprus Central AQ Data Management System	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
WP8. Air Quality model	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
WP9. Health impacts and Risk Assessment of particulate pollution	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Progress Reports Submitted to RPF																																						

The missions of the AC is

- 1) to follow closely the **implementation of the WP activities** and provide guidance when necessary,
- 2) to **help the implementation of specific field studies** (UAV field campaigns to characterize stack emissions, WP3),
- 3) to **review the deliverables of the project** before submission to RPF,
- 4) to make sure that the project's results are properly translated to answer the public authorities' needs related to Air Quality (linked to WP2),
- 5) to actively participate to the dissemination of the results (linked to WP2).

An **Advisory Committee (AC)** led by DLI (C. Savvides) and Cyl (Prof J. Sciare) will be formed with the public authorities (DLI, DoM, DoE), the NGO (CySHA), and the **WP leaders** (GB, TC+IK, ES).

*The Advisory Committee will play here a critical for this last phase which aims to **translate its results at the closest of stakeholders' needs** and maximise the impact of the results well beyond the duration of the project.*

***Health Impacts, focusing on morbidity and mortality rates**, will be quantified for various policy scenario analyses that will be defined at the start of the project in cooperation with the Advisory Committee*