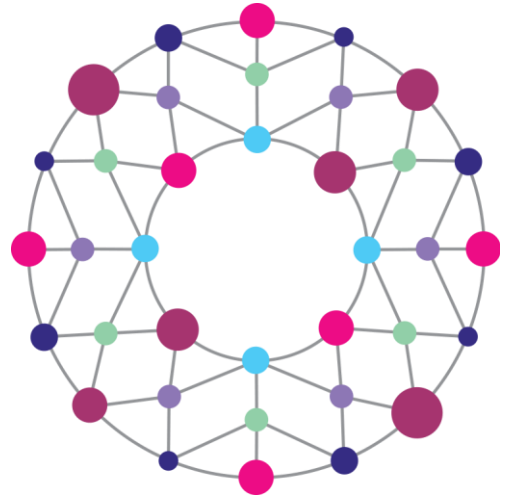
Indoor/Outdoor Bioaerosols Interface and Relationships Network

Frederic Coulon and Zaheer Nasar

28th September 2021

BioAirNet.



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Who we are?

Prof Frederic Coulon
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Dr Gill Drew
(Co-I, Cranfield University)

Prof Sean Tyrrel
(Co-I, Cranfield University)

Prof Ian Colbeck
(Co-I, University of Essex)

Prof Kamaldeep Bhui (CBE)
(Co-I, University of Oxford)

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Prof Rob Kinnersley
(Environment Agency)

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(Co-I, University of Essex)

Prof Simon Jackson
(Co-I, Plymouth University)

Prof Mark Lemon
(Co-I, De Montfort University)

Dr Philippa Douglas
(Co-I, Public Health England)

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Cranfield University

DE MONTFORT UNIVERSITY LEICESTER

[dstl]

Environment Agency

Public Health England

University of Essex

UNIVERSITY OF OXFORD

UNIVERSITY OF PLYMOUTH

Natural Environment Research Council

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Four interconnected themes

Theme 1: BioPM sources & dynamics across the indoor-outdoor continuum

Chairs Prof Ian Colbeck (Essex) & Prof Sean Tyrrel (Cranfield)

Theme 2 BioPM sampling & characterisation

Chairs Dr Corinne Whitby (Essex) & Prof Frederic Coulon (Cranfield)

Theme 3: Human Health, behaviour & wellbeing

Chairs: Dr Philippa Douglas & Dr Emma Marczylo) (PHE), Prof Kamaldeep Bhui (Oxford) & Prof Simon Jackson (Plymouth)

Theme 4: Policy & Public Engagement

Chairs: Dr Gill Drew (Cranfield) & Prof Mark Lemon (De Montfort)

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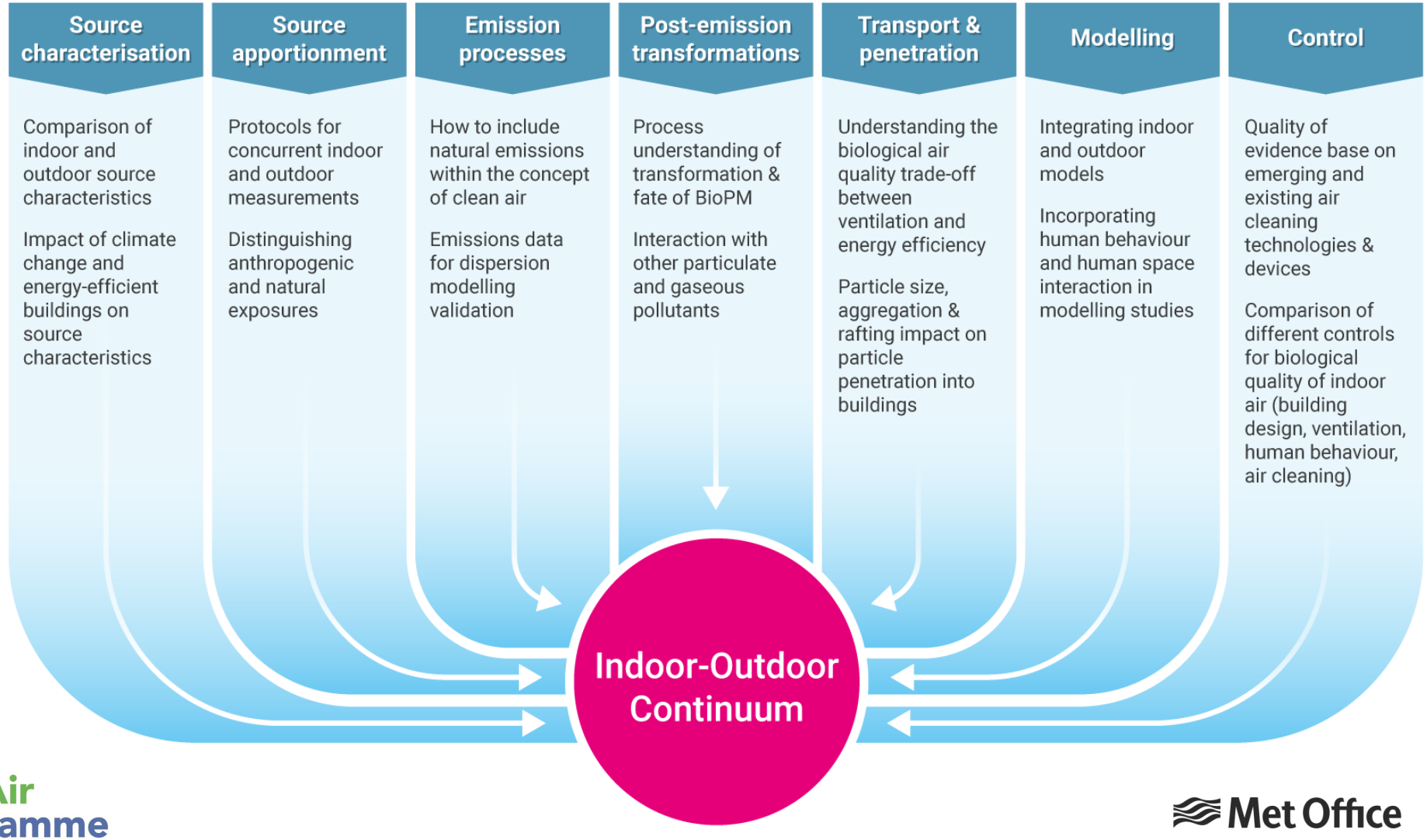
Where are we up to and what insights did we gain?

- Thematic workshops
- Key research gap analysis
- Outputs – Infographics, Compendium, white paper, educational materials
- Outreach activities
- Cross-Network engagement

Theme 1 - Gap analysis on the future change scenarios in sources and emissions of BioPM due to change in climate, land use and buildings regulations



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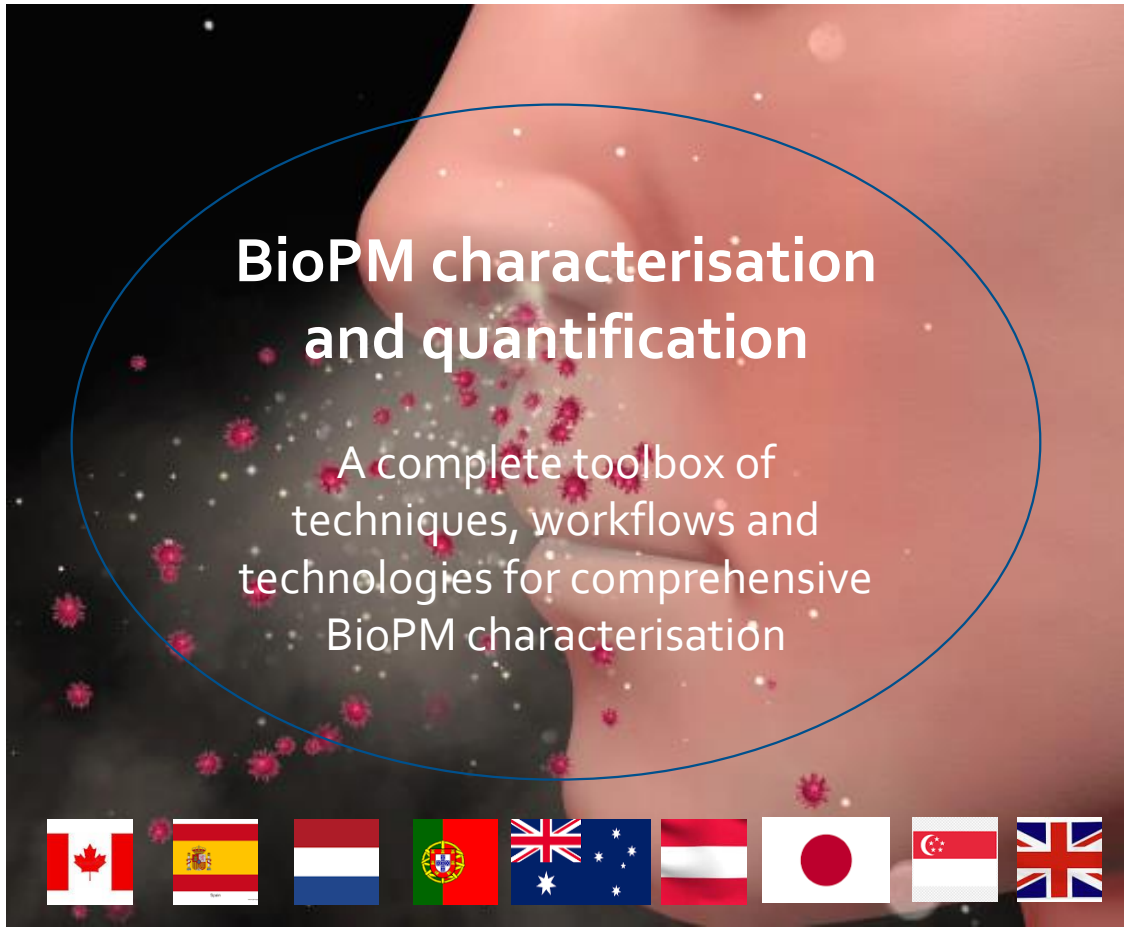
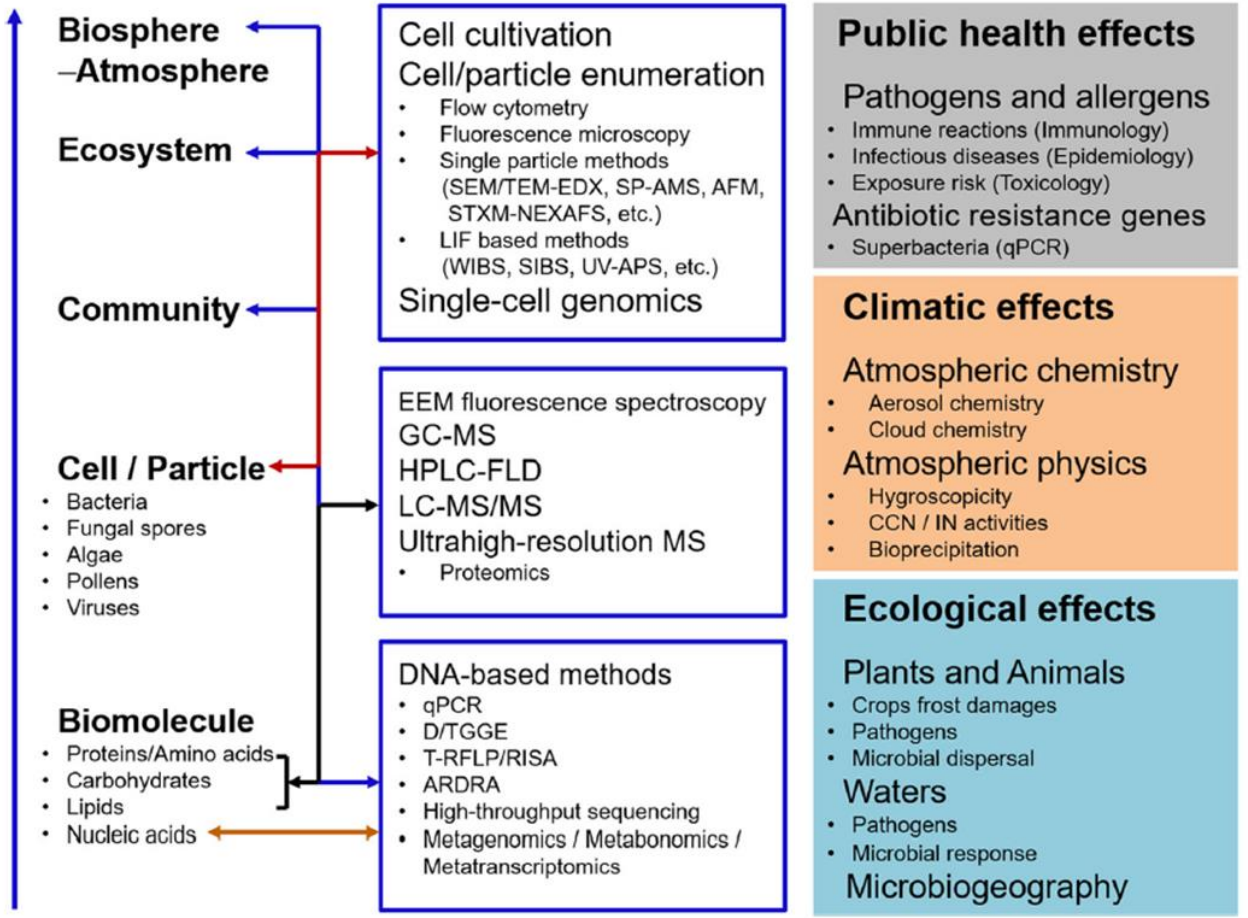
Theme 2 - Compendium of analytical methods for characterisation and quantification of bioaerosols





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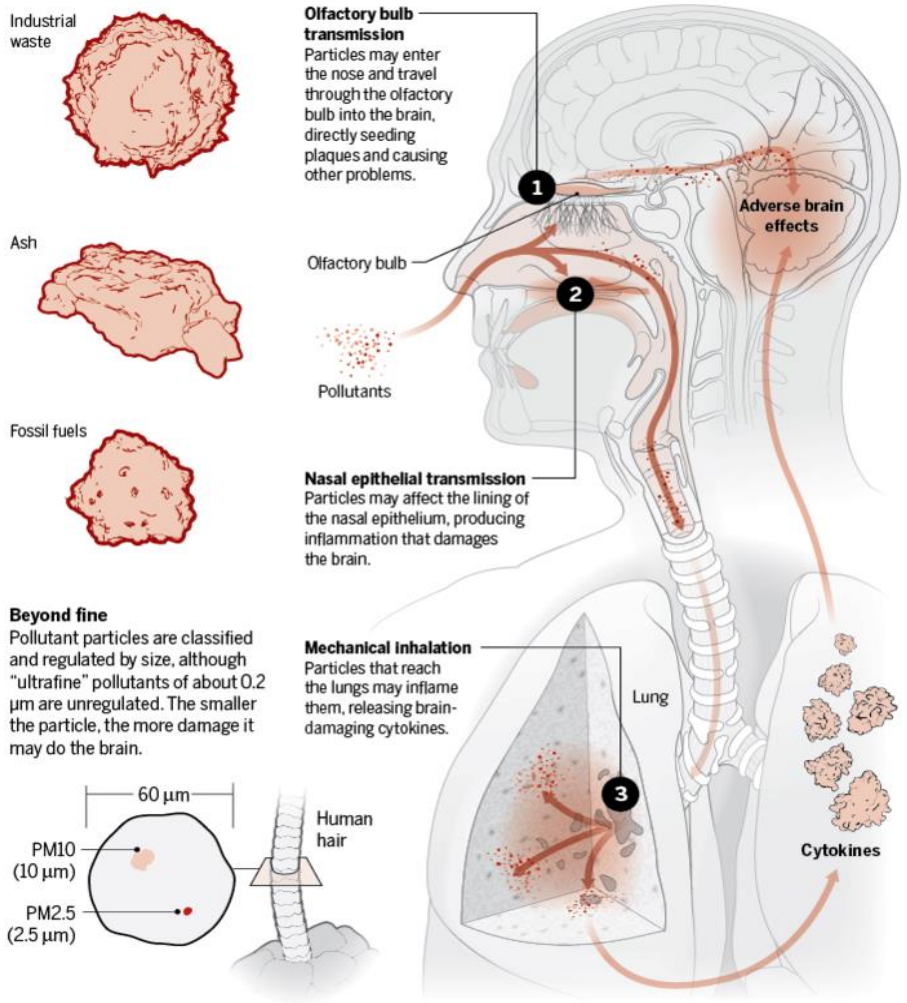
Theme 3 – White paper on Air Quality, Bioaerosols and Mental health: Challenges and future directions

ISSN: 2666-5581

1. Review the existing evidence on air quality (indoor/outdoor) and mental health
2. Elucidate the potential mechanisms and factors increasing the vulnerability of humans (youth) to mental illness
3. Discuss the prevention measures for reducing bioaerosols exposure to enhance wellbeing and mental health
4. Identify the key research gaps and future direction for Health Conditions and Causal Models research



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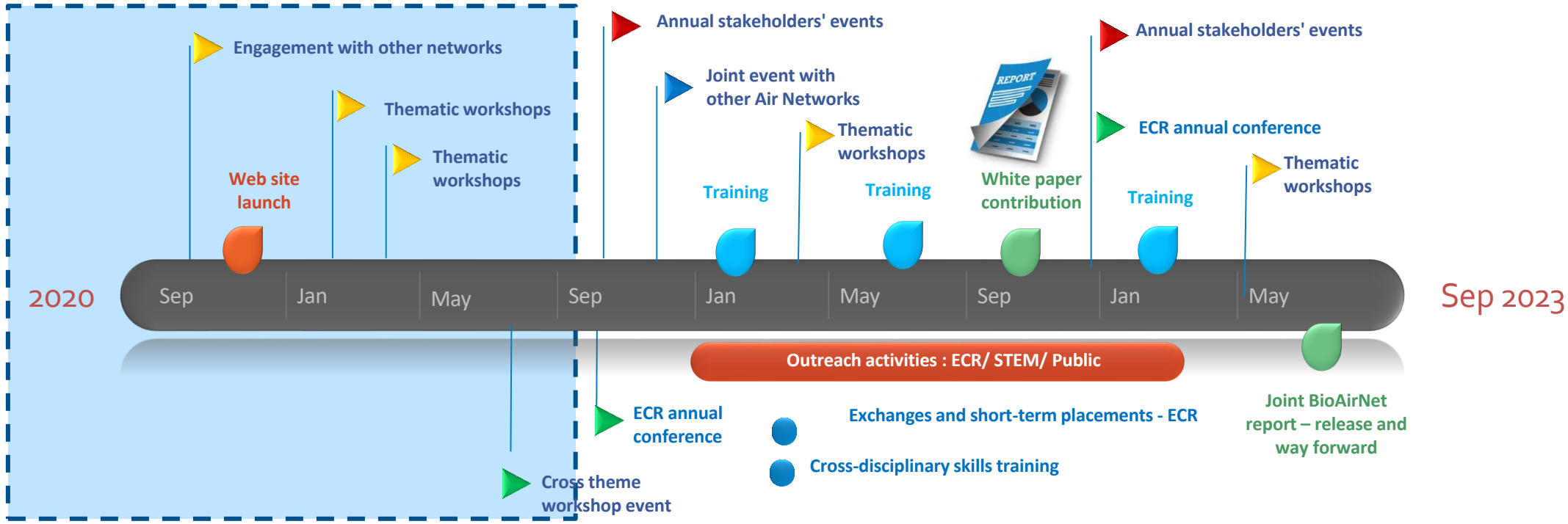
Theme 4 – Setting up a road map for stakeholder engagement – school, public, industry and policy



1. Focused workshops with a particular stakeholder group
2. Open workshop
3. Schools and citizen science activities
4. Expert videos with perception questions

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Theme 4 – Outreach materials and engagement with other networks

Free to download are the Article, Activity sheet and an Animation at: https://futurumcareers.com/take-a-deep-breath-investigating-air-quality

SAQN STFC AIR QUALITY NETWORK

Two on-going pilot projects

- Modular Relaxed Eddy Covariance sensor for Air Quality: MOREC-AQ
- Exploring how sources, behaviour and mitigation strategies influence Indoor Air Quality: A Pilot Study

Breathing City
Future Urban Ventilation Network

BioSkyNet - the first global network of bioaerosols researchers

BioAirNet

TRANSITION
CLEAN AIR NETWORK

Joint stakeholder-led workshop, Jan 2022
Future mobility beyond COVID-19: two steps forward, one step back for clean air and public health

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