



GRAPHEN



EUREKA cluster



EUREKA

“Graphene and 2D Materials”



Antonio Correia

Phantoms Foundation (Spain)

GRAPHEN 

EUREKA cluster



Status

Current scenario

Expressions of Interest (Eoi) (Industry involvement, etc.)

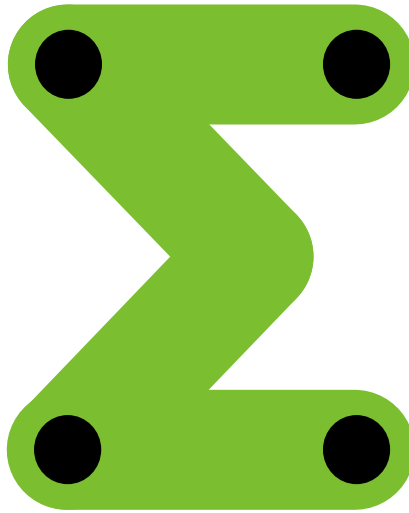
Strategic Research Agenda (SRA)

International Collaborations (Graphene Flagship, etc.)

EUREKA

innovation across borders

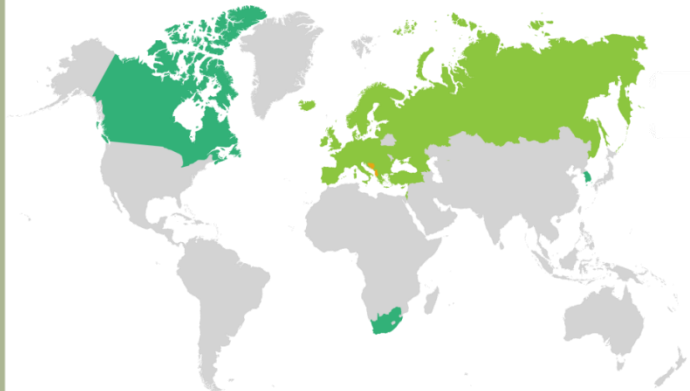
Leading **platform**
for international
cooperation



Intergovernmental
network

Supporting
market-oriented
R&D projects

Facilitating
access to finance

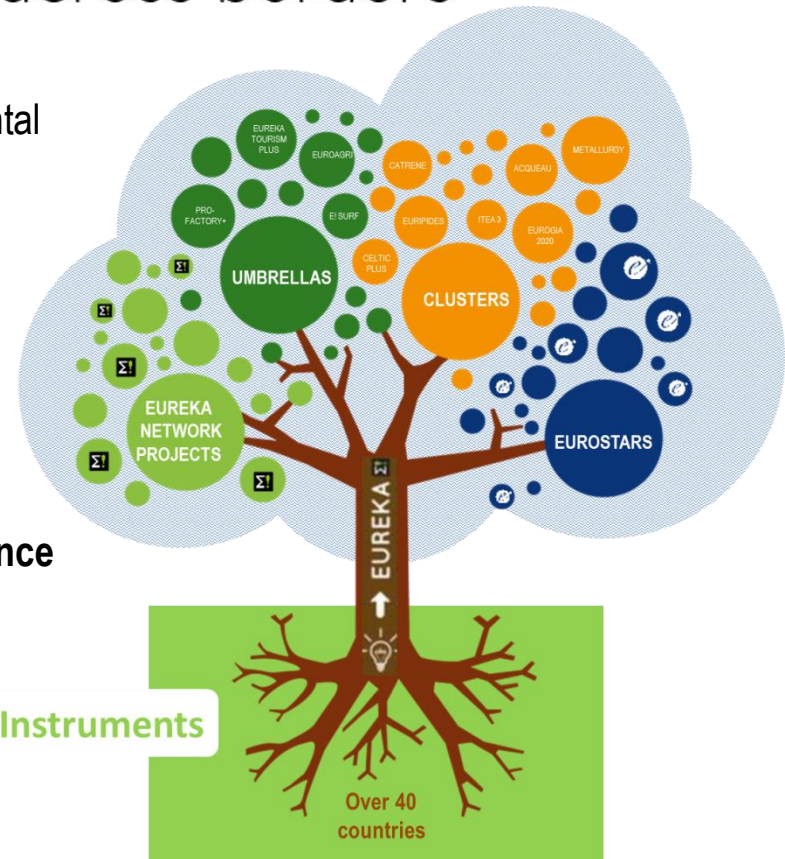


 Member countries

 Associated Countries

Canada
South Africa
South Korea

Instruments



Source:

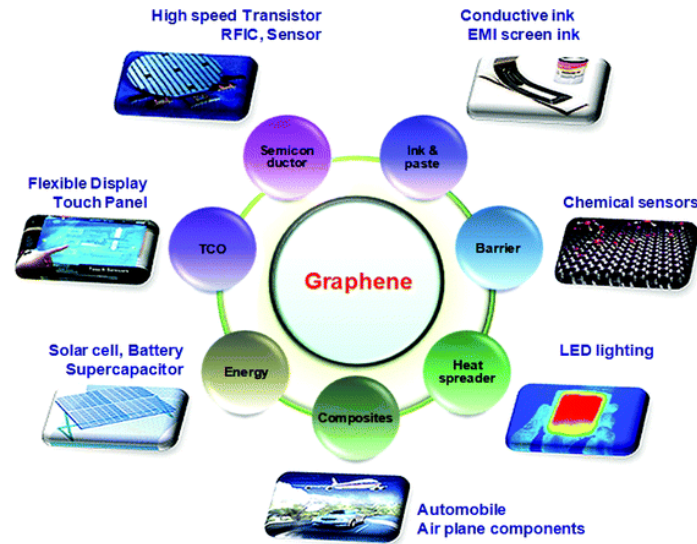


Current scenario

Graphene & 2D: current and potential applications

GRAPHENE AND OTHER 2D MATERIALS EXTRAORDINARY PROPERTIES

Electrical and thermal conductivity; strength; biocompatibility; chemical stability; etc.



Source:
Graphene Flagship Roadmap
Nanoscale, 2015, 7, 4598-4810

INDUSTRIAL & TECHNOLOGICAL CHALLENGES

Mass production of high quality graphene

- i. Scaling up
- ii. Industrial applications

IP SCENARIO

- i. Patenting in graphene has risen rapidly in recent years. Leading of Asian entities.
- ii. Chinese influence since 2013 has continued to grow

NATIONAL INITIATIVES

- i. China Innovation Alliance of the Graphene Industry.
- ii. National Graphene Action Plan 2020 (Malaysia)
- iii. National Graphene Institute (NGI) – UK
- iv. “GNT” National Research group - France

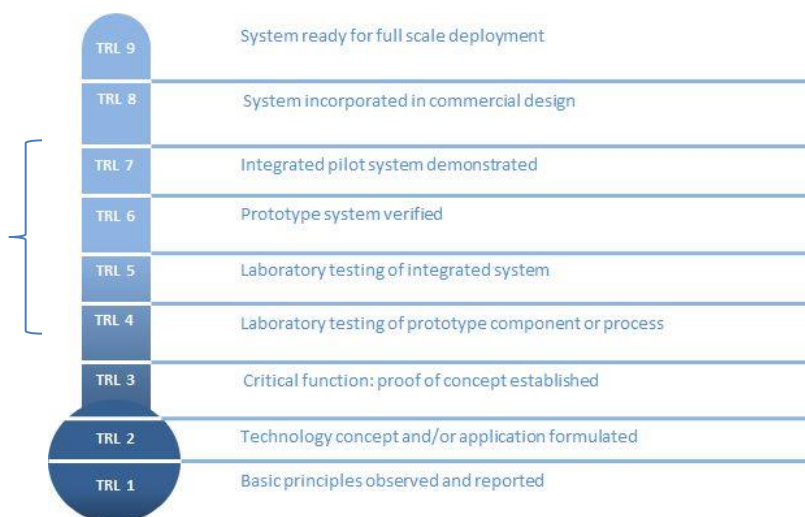


Why?

- ✓ To fill the gap between academic research and market.
- ✓ To develop new industrial applications and to boost the existing.
- ✓ To standardize the «big family» of graphene and related materials.

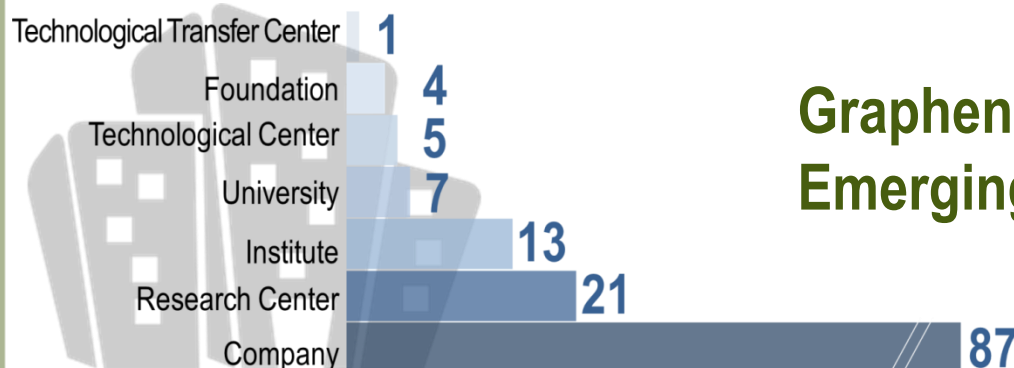
**Complementary initiative
Accelerator instrument**

Technology Readiness Level

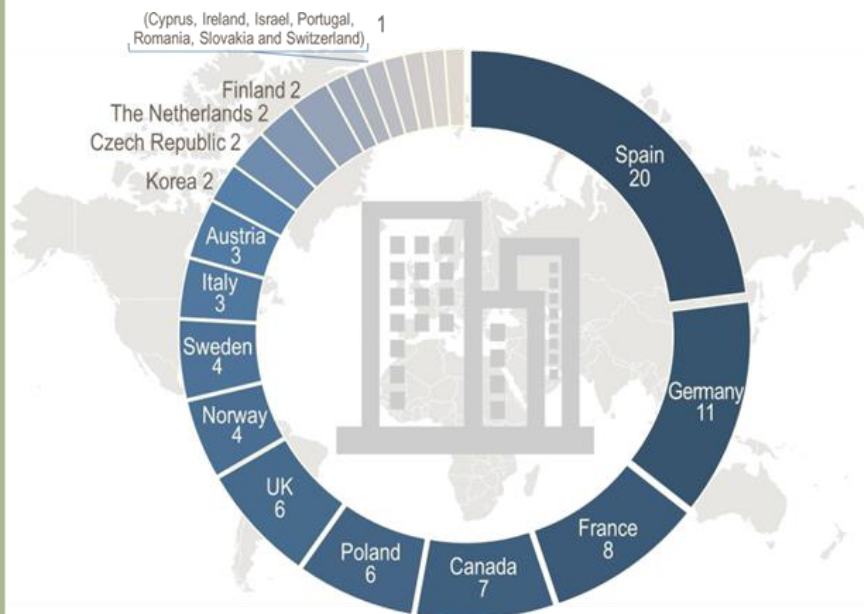


Expressions of Interest (Eol)

138 Eol received (January 2017)



**Graphene & 2D Materials:
Emerging field/technology**



21 countries represented

87 companies



60 extended Eol received / 35 companies (January 2017)

SRA – Experts Committee



Stephan Roche (ICN2, Spain)
Julio Gomez (Avanzare, Spain)
Iñigo Charola (Graphenea, Spain)
Jordi Reverter (ICN2, Spain)
Denis Guilhot / Frank Koppens (ICFO, Spain)
Laurent Baraton (ENGIE, France)
Chester Burt (Grafoid Inc., Canada)
Francesco Bonaccorso (IIT / Bedimensional, Italy)
Xinliang Feng (Univ. Dresden, Germany)
Norbert Fabricius (KIT / ISC, Germany)
Tapani Ryhanen (Emberion, Finland)

Around 60 Extended Expressions of interest received

Input for the Strategic Research Agenda (SRA) for a catalogue of possible projects to be funded under the Cluster within its priority areas.

- Short description of the entity
- Main research areas of interest in 2D materials (research, applications, etc.)
- Market needs
- Objectives & challenges of your institution within the cluster

Strategic Research Agenda

MAIN R&D TOPICS // MAIN R&D RESEARCH AREAS

- i. Standardization.
- ii. Production (Scaling up)
- iii. Applications:
 - i. Electronic devices.
 - ii. Biomedical applications.
 - iii. Energy (storage).
 - iv. Composites.



EUREKA Cluster promotion



- National Industrial Leaders confirmed (11)
(France – ENGIE / Canada - Grafoid / UK – Aixtron / NO – Abalonyx, etc.)
- National Industrial Leaders to be confirmed (2)

GRAPHEN 

EUREKA cluster



Action Plan

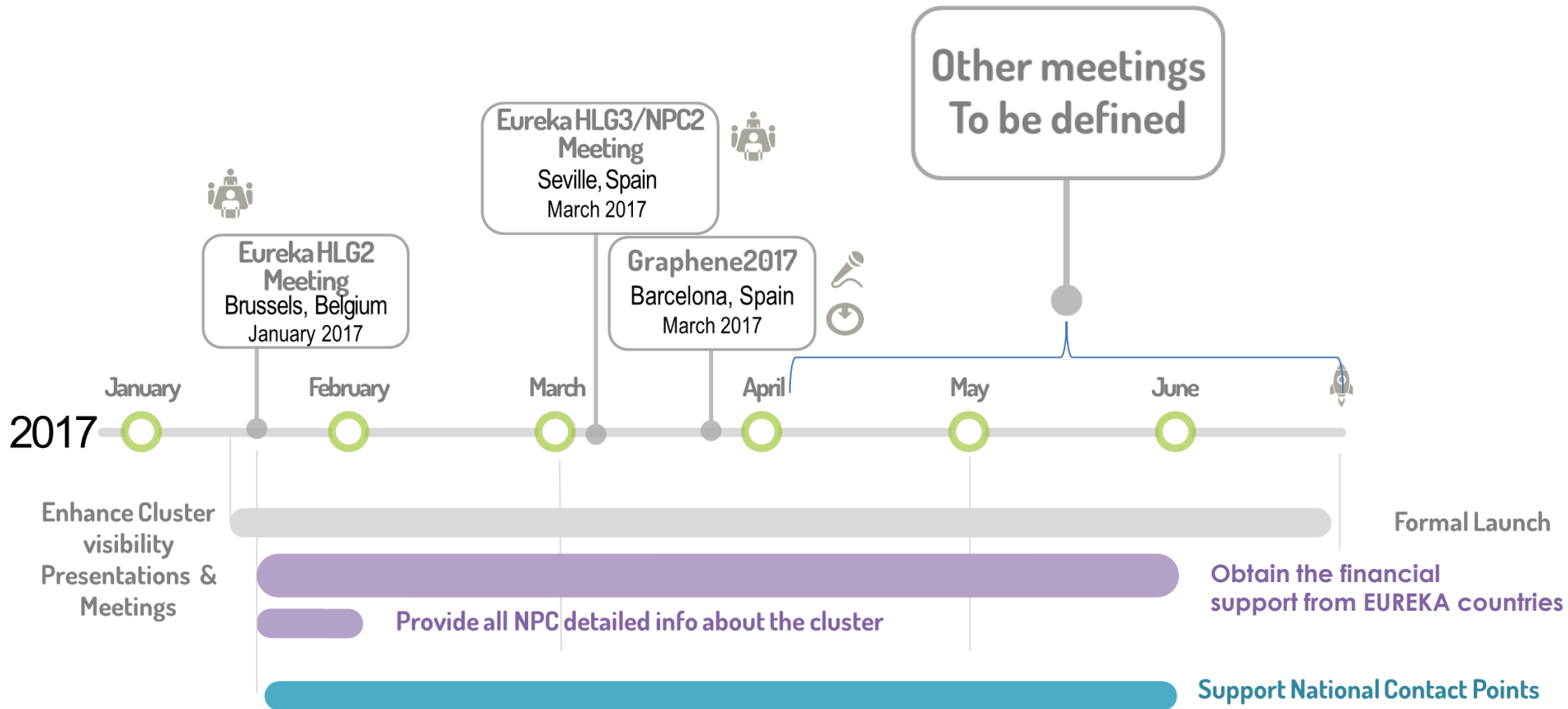
Towards institutions

Promotion activities

Proposal submission

Action plan

Towards institutions

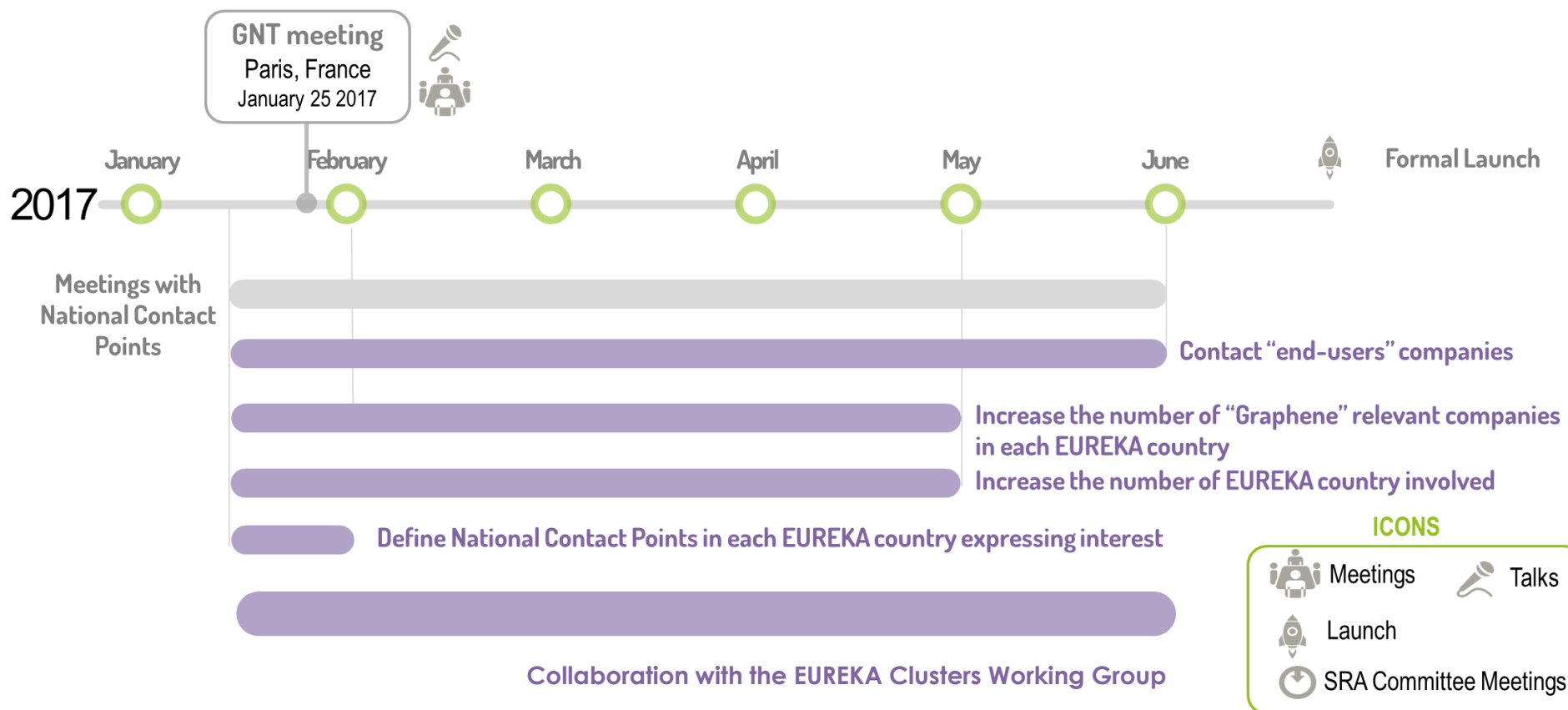


ICONS



Action plan

Promotional activities



Action plan

Proposal submission

ICONS



Meetings



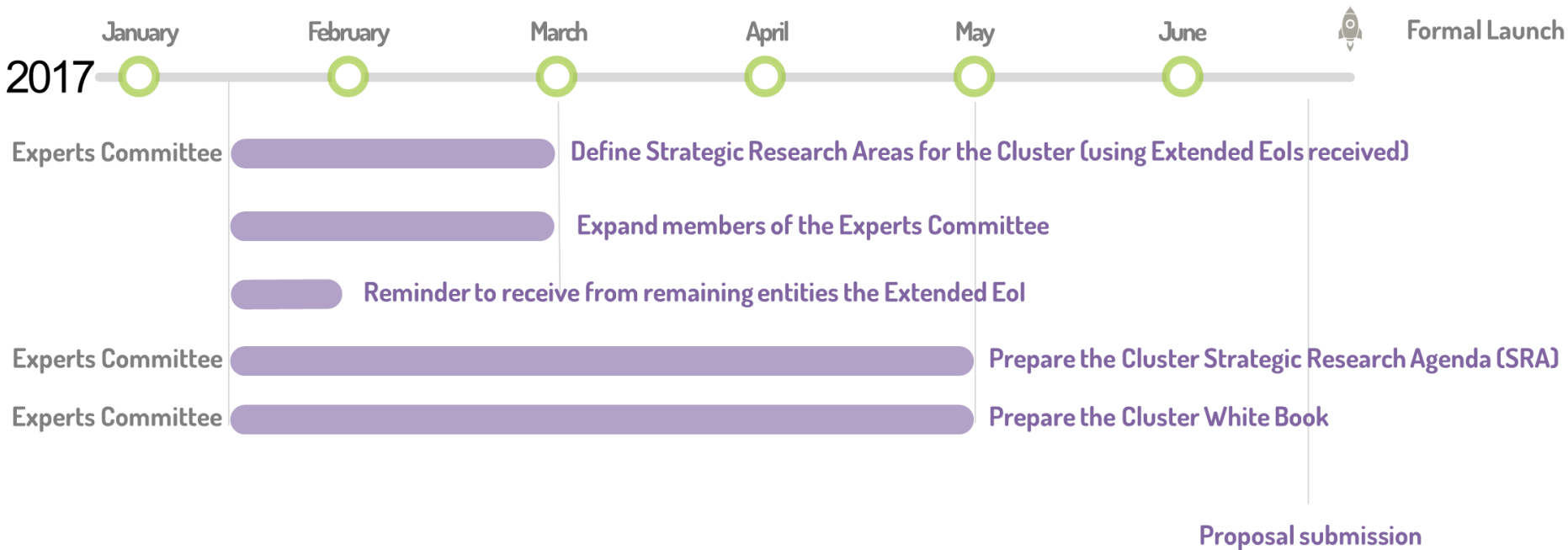
Talks



Launch



SRA Committee Meetings



**Interested in receiving more information,
please contact:**

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Thanks for your interest