



NIS Plenary meeting, Dec 11th

WG3 Secure ICT Research & Innovation



NIS Platform WG3 Secure ICT Research & Innovation



WG3 Initial priorities

- **WG3 Members**
- **WG3 main deliverables**
- **WG3 Organization: Steering Committee & Sub-grouping ("Divide to win")**
- **WG3 Steps achieved**
- **WG3 Next steps**



- ***Main objective of WG3***

- contribute to the coordination of the European activities in Research and Innovation in connection with the European Cyber Security strategy and in accordance with WG3's scope*



- **Scope**

- *address Cyber Security research and innovation in the context of the EU Strategy and Network and Information Security (NIS) Platform.*
- *identify the key challenges and desired outcomes*
- *promote truly multidisciplinary research that foster collaboration among researchers, industry and policy makers*
- *serve as a facilitator for the coordination of, and collaboration between, research agendas across Europe*



(Scope cont.)

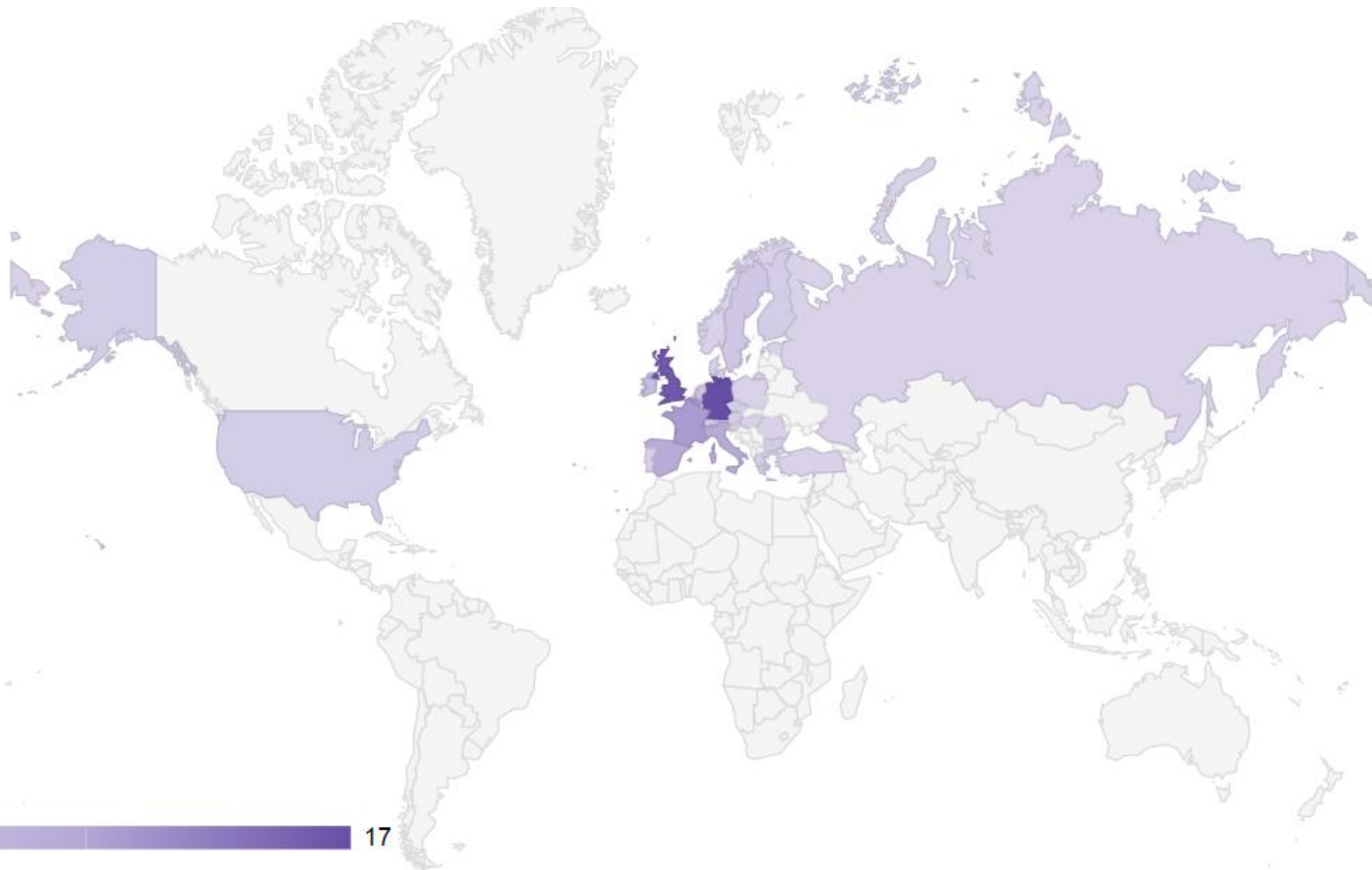
- examine ways to increase the impact and commercial uptake of research results in the area of secure ICT, including via innovative financial instruments and funding methods as well as new business models*
- provide input to and elicit requirements from the work of both WG1 (Risk Management) and WG2 (Information Exchange)*



- **Constituency:**

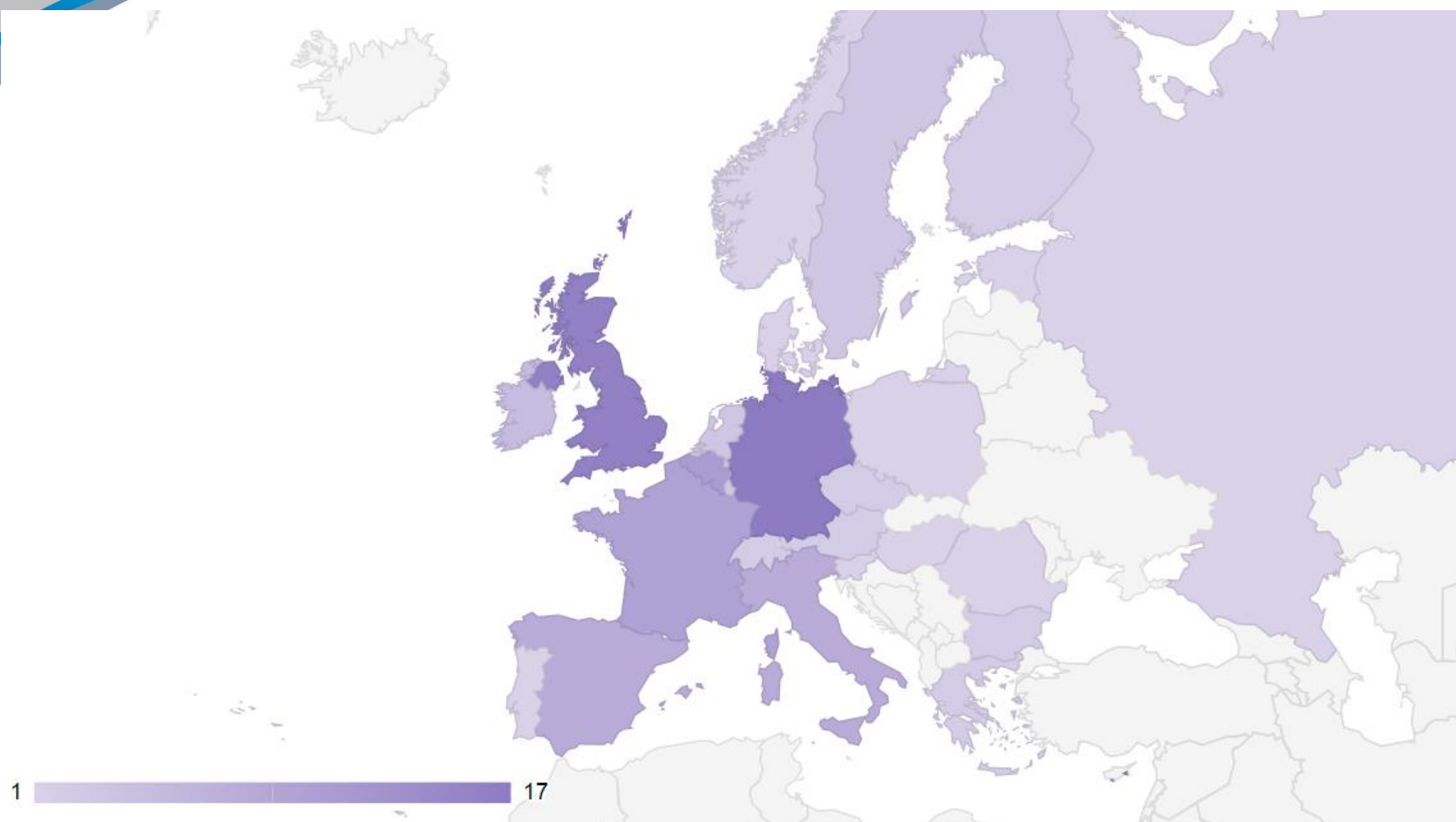
- Members of the WG are **qualified experts** in the field **willing to contribute** to the achievement of the stated goals and objectives of this WG3 in accordance to the stated principles of the WG.
- Representatives from **industry, research, academia,** and **governmental** and **regulatory** bodies are present.

WG3 Membership geographical representation (worldwide)



x11 new members sin KoM (today 108)

WG3 Membership geographical representation (european map)





- **Method**

- *Inclusive*
- *Value oriented*
- *Collaborative*
- *Coordinated with related initiatives*
- *Creativity unlimited (emerging topics anytime, anywhere).*
- *Transparent*
- *Neutral*
- *Simplifying things or problems*



- ***Method (cont.)***

- *Work-sharing (task grouping) for better results*
- *Virtual meetings mainly, physical ones for main topics and milestones' acceptance*
- *Mix of bottom-up and top-down*

Quick overview of WG3's ToR



- ***WG3 ENISA platform structure at <https://resilience.enisa.europa.eu>***

Shared spaces

Home
Article 13a
NIS Platform
Shared Documents
WG1 - Risk management, Information Assurance, Risks Metrics, Awareness Raising
WG2 - Information Exchange, Incident Coordination, Incident Reporting, Risks Metrics
WG3 - Secure ICT Research and Innovation
WG3 - Forum
Shared spaces
Main documents
Meetings
Secure ICT landscape
Business cases and innovation paths
Snapshot of Education & Training landscape for workforce development
The Strategic Research Agenda (SRA)
Areas of Interest (AoI)
Registration to the meeting of WG3

by Rossella Mattioli — last modified Oct 21, 2013 10:12

📁 **Main documents** — by Rossella Mattioli

📁 **Meetings** — by Rossella Mattioli — last modified Oct 21, 2013 10:12

📁 **Secure ICT landscape** — by Rossella Mattioli

📁 **Business cases and innovation paths** — by Rossella Mattioli

📁 **Snapshot of Education & Training landscape for workforce development** — by Rossella Mattioli

📁 **The Strategic Research Agenda (SRA)** — by Rossella Mattioli

📁 **Areas of Interest (AoI)** — by Rossella Mattioli

Subscribe

WG3 - Secure ICT Research and Innovation

WG3 - Forum

The NIS Platform Forum for the WG3

Secure ICT landscape

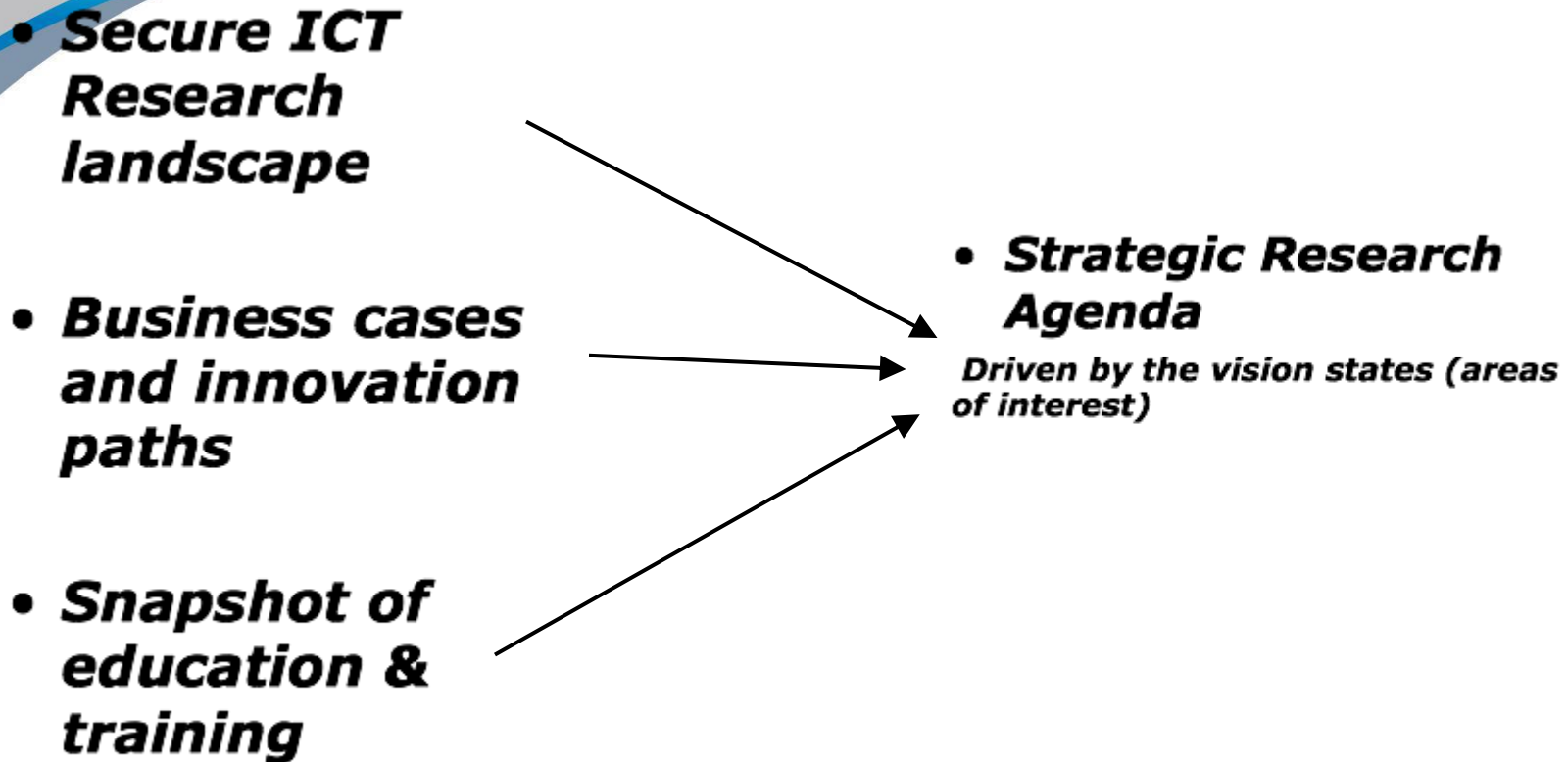
Business cases and innovation paths

Snapshot of Education & Training landscape for workforce development

The Strategic Research Agenda (SRA)

Areas of Interest (AoI)

li — last modified Oct





- ***Secure ICT Research landscape (Jun. 2014)***
- ***Business cases and innovation paths (Dec. 2014)***
- ***Snapshot of education & training (Jun. 2015)***
- ***Strategic Research Agenda (Mar. 2015)***



- ***1 editorial team x deliverable***
- ***In the case of SRA (strategic research agenda):***
 - visions = Areas of Interest (AoI)***
 - 1 leaders' team x AoI***
 - chairs = editorial team***
- +
- ***1 Steering Committee (formed by all editorial team + AoI leaders)***



- ***WG3 KOM meeting – Sept. 27***
- ***Create & empower sub-groups***
- ***ENISA platform new structure for a better communication & transparency***
- ***First description of the Areas of Interest (AoI) as from the KOM***
- ***Deliverables' ToC draft creation***
- ***Bottom-up (KoM) & Top-Down rounds for generating SRA "visions" (AoI)***
- ***Methodology set-up towards SRA (3 phases: a) parallel groups, b) crossing of enablers/inhibitors, c) final version)***
- ***AoI (visions) refinement is ongoing (from 5 to 3)***



• **WG3 newsletter:**

A great kick-off meeting!

Some statements made by participants about the day:

"This was probably the one meeting with the European Commission that I truly enjoyed."

"I was surprised by the openness of conversations, even with industry present."

"This was a very motivating meeting."

"The risk of innovating in the meeting facilitation process was worth taking."

"Even though the meeting's purpose was a tall order, the hosts got it done!"

"It is motivating to see the contribution from such a dynamic diverse community."

"It is indeed possible to stick to an agenda schedule!"



3. Privacy, security and civilisation



distinguishes a civilization with the rule of law prevails from a society, where simply the strongest party would rule or make the rules. The digital world is also part of civilisation and freedom from surveillance and from the threat of surveillance should be the rule and the regular situation, not the exception.

4. Resilient Infrastructure and Services



Future sectorial infrastructures, processes and resources must be adaptive, distributed, collaborative, and efficiently controlled. They depend on an ICT infrastructure and services that must be reliable, predictable and always available, that operates confidentially and privacy protecting and should be capable to react to cyber threats in

What opportunities did you see that convinced you to invest time and other resources to participate in WG3?

agenda (17) better (3) building (3) challenges (4) citizen (3)
collaboration (5) contribute (7) create (3) critical (3) cyber (4)
cybersecurity (11) data (4) define (5) develop (5)
eu (16) europe (3) european (3) experience (3) focus future (13)
h2020 (4) help (5) ict (5) industry (4) influence (5) infrastructure (5)
initiatives (3) innovation (8) input (3) interest (3) internet (4) making (3)
market (3) networking (4) opportunity (9) participate (3) people (4)
platform (4) promises (4) privacy (7) products (3) protection (10)
provide (4) push (4) real (3) research (55) results (3)
security (28) shape (3) standards (2) strategy (3)
support (7) trust (5) understand (5) visions (3) wg3 (3) work (3)

Figure 1: Word cloud of expectations



Purpose:

Identify area by area and per application domain the most relevant technologies will contribute to the creation of the Strategic Research Agenda (SRA).

Timeline:

- Final ToC: 8 January 2014
- First contributions: 7 February 2014
- First consolidated draft: 15th of March 2014



ToC (draft):

1. Basic technologies: typology of technologies

es, access control, system integrity, cryptology, audit and monitoring, configuration management and assurance, privacy related technologies, hardware and platform security, software security and secure software development, network and mobile security, cybersecurity threat technologies, information sharing technologies

2. Cloud/IoT:

Models, current approaches and projects, open challenges



ToC (draft): (cont.)

3. Applications:

e-Government; Energy/smart grids/industrial control systems; Smart transport; Banking and finance; eHealth; Smart cities; Telecommunications/ICT services; Military and defence; Food; Agriculture; Media; Air traffic management; Space systems; Cyber security training.

4. Comparison of cybersecurity technologies in application domains



ToC (draft):

1.Introduction and problem definition

2.Methodology for the study

3.Business cases

- Initial sample market and industry analysis
- Identification of stakeholder requirements
- Selection and analysis of high impact use cases
- Cost-benefit analysis of research topics in relation to use cases
- Initial economic incentive analysis

4.Process Definition & Innovation Models

- Survey of best practices in innovation (SOTA)
- Technology and research analysis link with 'Secure ICT landscape' deliverable
- Recommendations to H2020 on innovation processes

5.Summary of recommendations



Timeline:

Deadlines for deliverable:

- Draft: June 2014
- Final version: December 2014

Plan of action

- Now: Contributors and feedback on ToC
- Kickoff teleconference: 9th January
 - Assign responsibilities and agree mode of working
- Monthly teleconferences
- Face to face meeting around April



ToC (draft):

Introduction

- Concepts and definitions
- Methodology

Curricular and courses

Training

Gap Analysis

Summary of the results

Recommendations



Planned activities:

Situation scan:

- Survey of available courses, curricular, and training in the EU
- Responses through academic and industry consortia/organizations, as well as individuals – by March 15 2014

Gap Analysis

- Performed by the sub-WG By June 2014

Way Forward

- Proposed by the WG as part of the deliverable draft, by June 2014



- The Strategic Research Agenda (SRA) of the NIS Platform, is a living document stemming from WG3 and uses the other deliverables as input. The SRA will include the following:
 - Identification of the desired states (Areas of Interest - Aoi) for European Research and Innovation (Scenarios at 2025).
 - Challenges for achieving those states.
 - Enablers and inhibitors (from several perspectives).
 - Gap analysis.
 - Identification of R&D instruments.
 - Priorities & timeline.
 - Roadmap.
 - Key performance indicators.



Methodology towards SRA: (3 subsequent phases)

1st phase: parallel work on Aols (first version by June 2014 – final 3 months later)

- Description of the Aol's vision
- Description of the issues and challenges
- Identification of Technology, Policy and Regulation
 - Enablers
 - Inhibitors
- Gap analysis (technology, policy, regulation, and competences) for achieving the vision.



Methodology towards SRA: (3 subsequent phases) **(cont.)**

2nd phase: Cross-analysis (completed by Sept 2014 – final 3 months later)

- Finding commonalities (e.g., two enablers shared by Aols)
- Finding conflicts (e.g., one enabler becomes an inhibitor)
- Giving research priorities
 - Roadmap
- Timelines
- Identification of R&D instruments
- Key performance indicators



Methodology towards SRA: (3 subsequent phases) **(cont.)**

3rd phase: Final revision and polishing of the SRA

- Revising the Aols section, after the findings of phase.



ToC (draft):

Executive Summary

Introduction

Background

Description of Area of Interest

- Description of the Aol's vision
- Description of the issues and challenges
- Identification of Technology, Policy and Regulation
 - Enablers
 - Inhibitors
- Gap analysis (tech., policy, regulation, and competences) for achieving the vision



ToC (draft): (cont.)

Cross-analysis of all areas of interest's enablers and inhibitors

- Finding commonalities (e.g., two enablers shared by Aols)
- Finding conflicts (e.g., one enabler becomes an inhibitor)
- Giving research priorities
 - Roadmap
- Timelines
- Identification of R&D&I instruments
- Key performance indicators

Other aspects as Economic and Social benefits (using results from the business and education deliverables)

Biblio

Appendix



Editorial responsibilities:

Roughly speaking the main sections have the following responsibilities:

- Each AoIS sub group manage its section
- The cross analysis section is managed by the chairs and the Aols leaders (and corresponding groups)

The editors and sub-groups of the other 3 deliverables will be involved in all these steps, in particular the ones of the research landscape



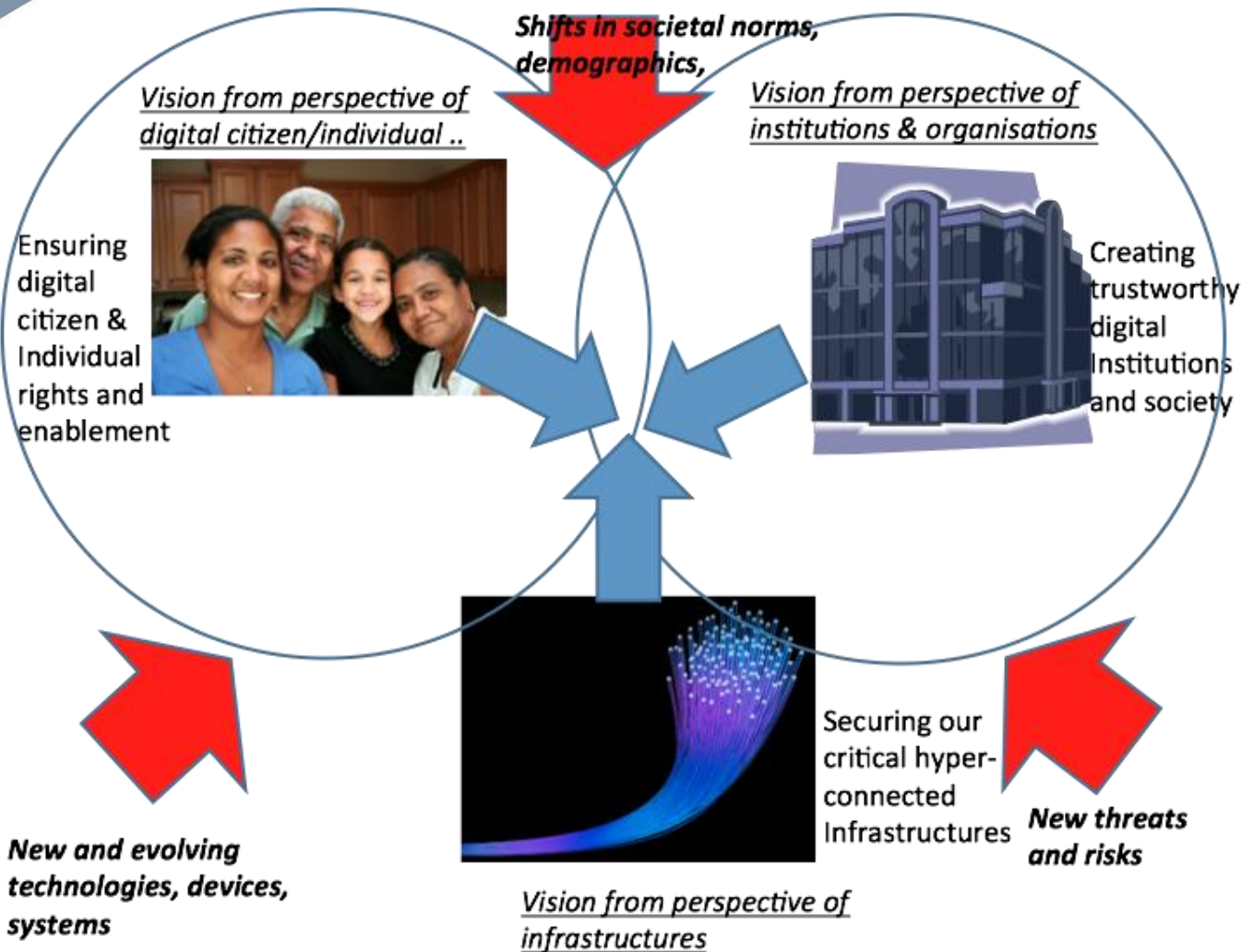
During the KOM the following AoI emerged:

- a. Citizen and people centric computing***
- b. Interconnected society***
- c. Privacy, security and civilisation***
- d. Resilient infrastructure and services***
- e. Multi-disciplinary skills, knowledge and awareness***

WG3 Steps achieved Strategic Research Agenda



Aol's revision





- ***WG3 meeting on Dec 12***
- ***Deliverables' ToC approval by members -> start creating documents by active members + forum discussions***
- ***Finalization of the AoIs revision***
- ***Extend and refine the challenges per AoI***
- ***Identify enablers & inhibitors per each AoI***
- ***Identify/add new topics into AoI's***
- ***Synchronization with the other WGs***
- ***...***



Thank you.



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