



# **Webinaire “Le soutien financier à des tiers”**

**6 septembre 2018**

## **Témoignage de projet**

**Albert Cohen**  
Inria  
[Albert.Cohen@inria.fr](mailto:Albert.Cohen@inria.fr)

**Rainer Leupers**  
Coordinateur  
RWTH Aachen



# TETRAMAX at-a-glance

- Innovation Action from ICT-04-2017 call
- Thematic focus: customized and low-energy computing
- **Total budget: 7 M€**
- **Duration:**  
Sep 2017 – Aug 2021
- **22 partners** covering
  - almost all EU countries
  - complementary expertise (technologies, networking, business generation)



# TETRAMAX partners



RUHR  
UNIVERSITÄT  
BOCHUM

RUB



IT4Innovations  
national01\$#&0  
supercomputing  
center@#01%101



TECHMO



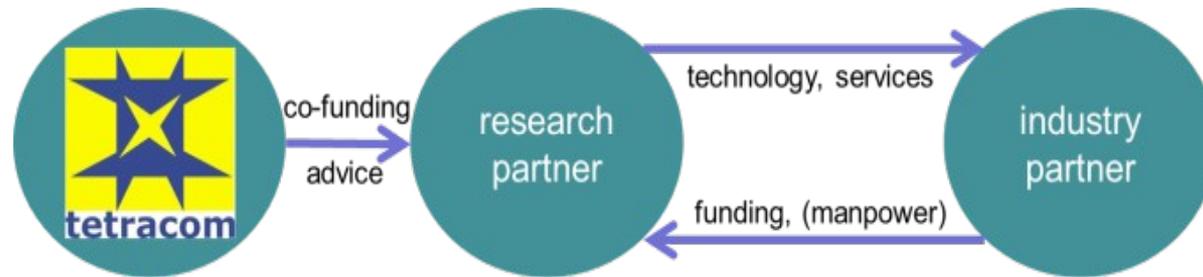
UNIVERSITÀ DI PISA



# TETRACOM background

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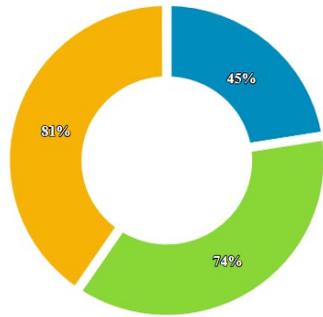
- **TETRACOM**: Technology Transfer in Computing Systems
- FP7 CSA, Sep 2013 – Aug 2016, [www.tetracom.eu](http://www.tetracom.eu)
- **Total budget**: 2 Mio. Euros, 8 consortium partners
- Key concept: Small-scale bilateral **Technology Transfer Projects** (TTPs)



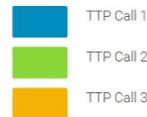
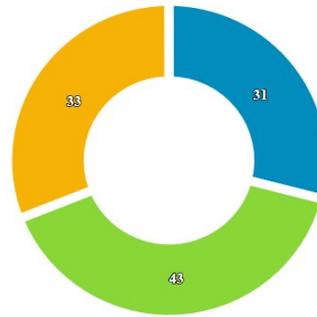
- **50 TTPs** coordinated in total, mostly acquired via open calls
  - 33 different academic clients, 46 industry clients
- Successful **proof-of-concept**, EU-wide results dissemination

# TETRACOM results and impact

SME involvement



Number of submissions

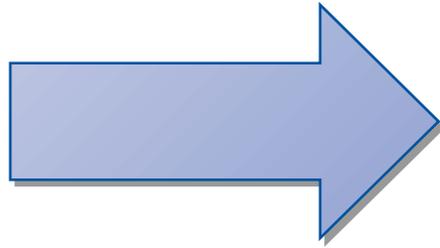


- High response in academia to open calls for TTPs
- Majority of TTPs performed with SMEs
- Tangible economic impact (revenue, jobs,

*"The TTP has been very profitable for us. The optimization reduces the losses and it increases our competitiveness in the market. In gross numbers, we can save around 150,000€/year..."*

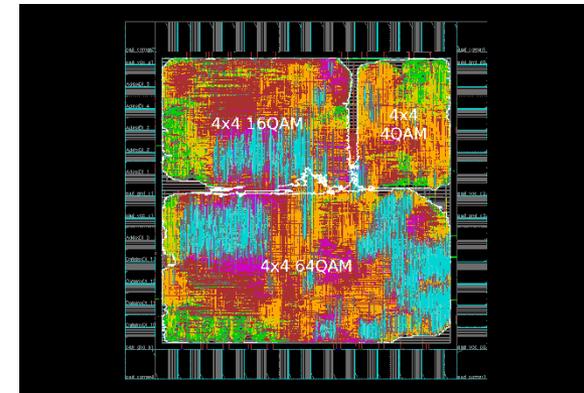
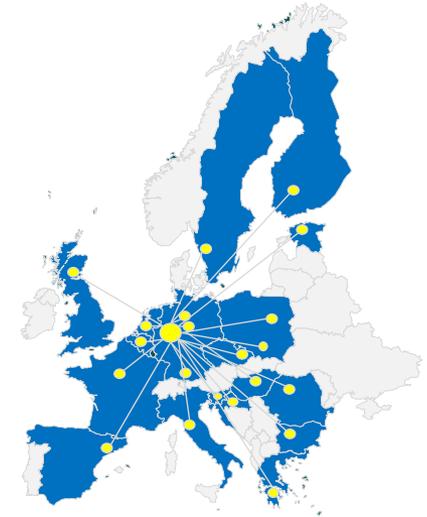
**David Rueda, Ingeniería & Mantenimiento, AGC Flat Glass Ibérica**

Performance indicator	#
Proposals received via open calls	107
Publications/presentations	68
New open source software packages	11
Patent applications	12
Immediate industry uptakes (in products, processes)	29
New industry jobs created	21
Average TRL elevation (levels before/after TTP)	2
EU countries involved	15
Start-up companies enabled (e.g. new investments)	4
SME participation (%)	67



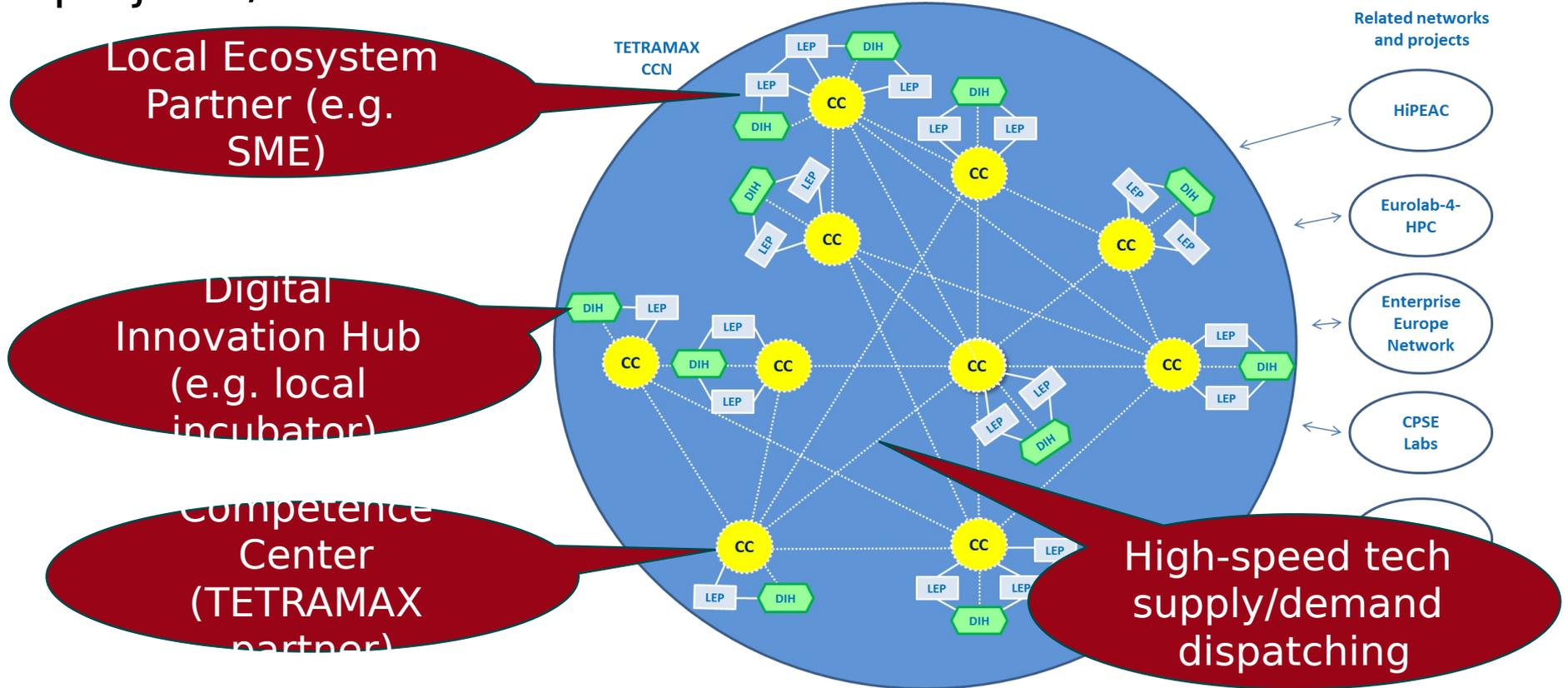
# TETRAMAX overall ambition

- Build up and sustain the **#1 European competence network** in customized and low-energy computing
  - offering technology brokerage, one-stop shop assistance, tech training to SMEs and mid-caps
- Support **50+ industry clients and 3<sup>rd</sup> parties** in the entire EU with innovative technologies
  - Revenue increase of 25 Mio. € based on 50+ new or improved products
  - Enabling 30+ new permanent jobs and
  - Significant cost and energy savings in product manufacturing



# TETRAMAX activity lines (1)

Building and leveraging a European **Competence Center Network (CCN)** in customized and low-energy computing, in tight collaboration with HiPEAC and related projects/networks



# TETRAMAX activity lines (2)

Stimulating, organizing, evaluating 60+ **Technology Transfer Experiments (TTX)** via open calls

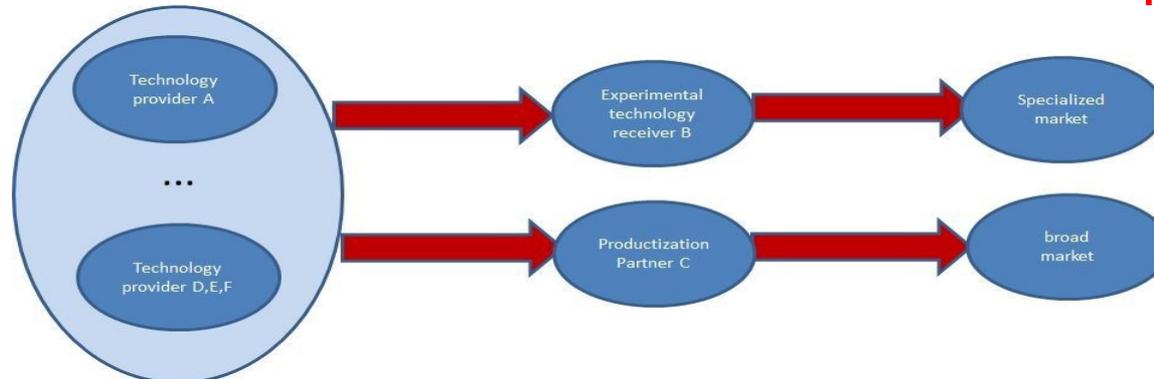
## 3 types of TTX

1. **Bilateral** TTX (like TETRACOM, but cross-border only)



6-12 months  
20k-50k €

2. **Value chain** oriented and **interdisciplinary** TTX



12-18  
months  
50k-100k €

3. **Entrepreneurial** TTX, business prototyping

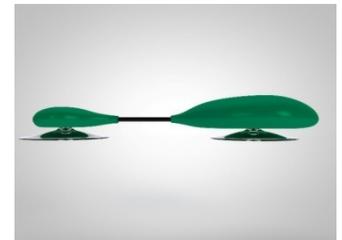
3-6 months  
20k-30k €

# TETRAMAX activity lines (3)

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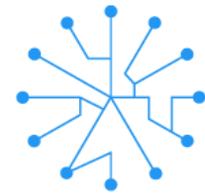
Paving the way towards **self-sustainability**

- TETRAMAX provides “**seed funding**” for a long-term, dynamic, and profitable Competence Center Network
- Development of customized “**business plans**” at three levels:
  - Individual TTX
  - Individual Competence Centers
  - Entire Competence Center Network
- **Revenue sources:**
  - New business generation (products, start-ups, services)
  - Investment acquisition (VC, private equity)
  - Leveraging ESIF and other regional funds



# EU/SAE initiative project ecosystem

- **CSA from ICT-04-2017 call:**
  - **Smart4Europe:** Catalysing Digitisation throughout Europe, Coordinator: **Rainer Günzler** (Hahn-Schickard)
- **Further IAs from ICT-04-2017 call:**
  - **FED4SAE:** Federated CPS Digital Innovation Hubs for the SAE Initiative, Coordinator: **Isabelle Dor** (CEA)
  - **DIATOMIC:** Smart access to manufacturing for systems integration, Coordinator: **Raimund Broechler** (INTRASOFT)
  - **SmartEES:** SMART Emerging Electronics Servicing DIH, Coordinator: **Jérôme Gavillet** (CEA)



EUROLAB-4-HPC



PO: Markus Korn

# TETRAMAX work packages

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**WP1**  
Competence  
center network  
(TUT)

**WP2**  
Open TTX  
Calls  
(FBOX)

**WP3**  
Container for  
individual TTX  
(RWTH)

**WP4**  
Dissemination  
and  
communication  
(UGENT)

**WP5**  
Impact analysis  
(FBOX)

**WP6**  
Business  
models,  
exploitation,  
and  
sustainability  
(PISA)

**WP7**  
Project  
management  
(RWTH)

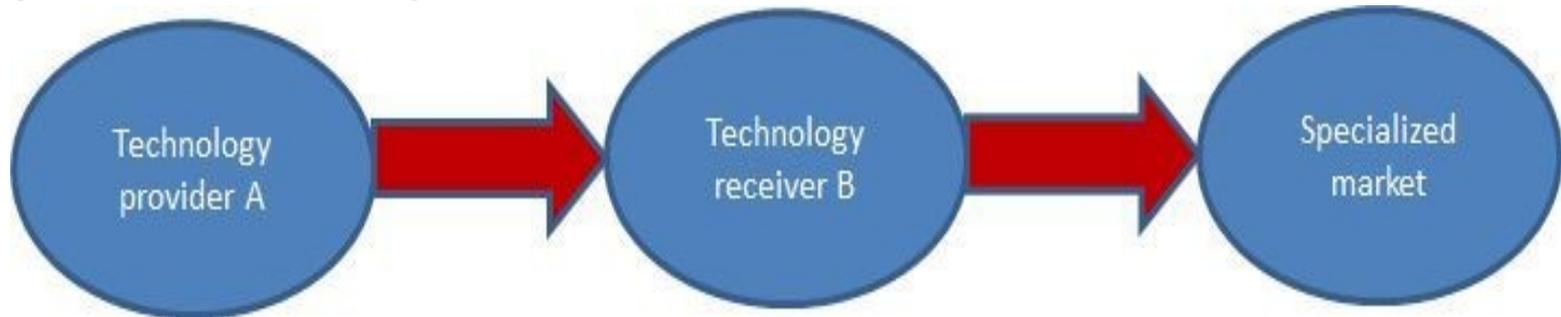
**WP8**  
Ethics  
requirements  
(RWTH)



# Bilateral TTX

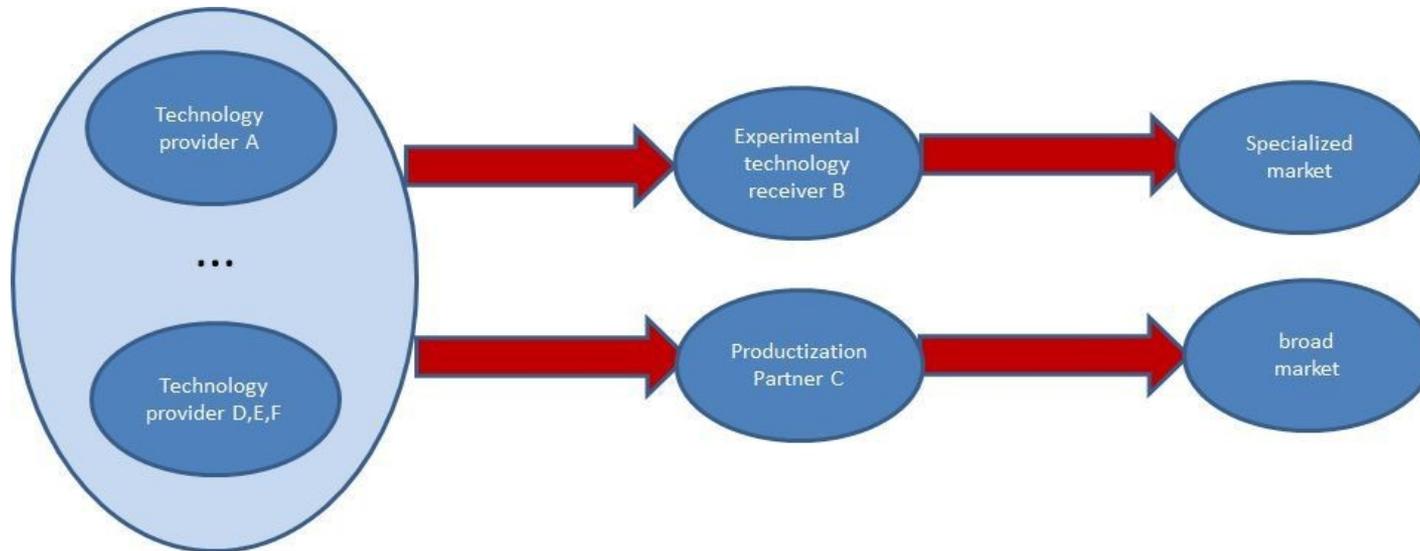
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- One academic partner A (university or other publicly funded research institution) and one industry partner B (privately funded, with a preference on SMEs and mid-caps), **no TETRAMAX partners participate to calls**
- A transfers a concrete CLEC technology to B, together with training, services, documentation etc. as necessary. B adopts the new technology in order to enable improved products, processes, or services
- Duration: 6-12 months
- Requested funding: 20k-50k EUR



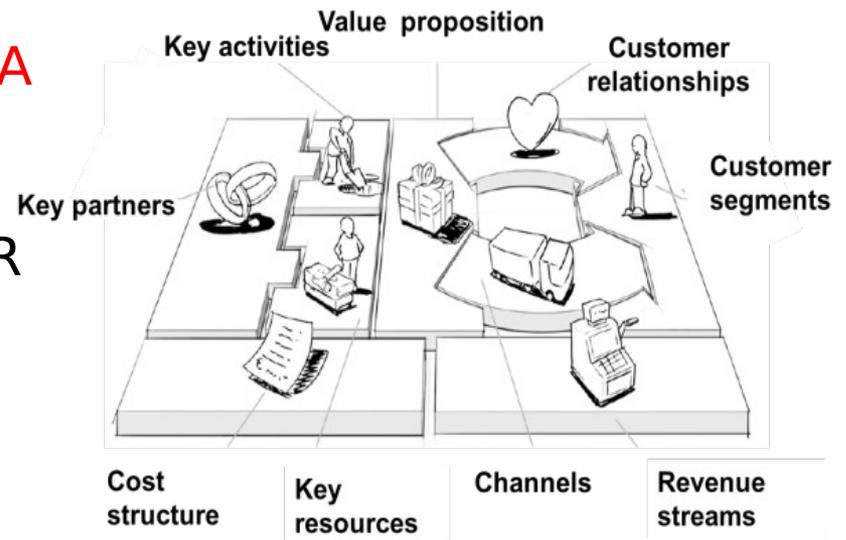
# Value chain oriented and interdisciplinary TTX

- $\geq 3$  partners: One academic partner A, one industry partner B acting as “OEM” for the transferred technology, and one partner C acting as “platform provider” for a wider market
- Up to three further auxiliary tech provider partners (D, E, F)
- TETRAMAX partners only permitted in role D,E,F
- Duration: 12-18 months
- Requested funding: 50k-100k EUR



# Entrepreneurial TTX

- Team comprises at least three distinguished members: *Entrepreneurial lead, Principal investigator, Mentor*
- TTX team intends to bring itself towards a **convincing business plan and to get “investor ready”**. The TTX is a framework for describing a new technology-based business using a **Business Model Canvas**
- Adopted from **Eurolab-4-HPC CSA**
- Duration: 3-6 months
- Requested funding: 20k-30k EUR



# TTX conditions at-a-glance

	Bilateral TTX	Value chain oriented/ multidisciplinary TTX	Entrepreneurial TTX
Structure	1 academic, 1 industry partner	<= 6 partners, at least 1 academic, at least 1 industrial OEM partner, at least 1 productization partner	1 or more academic partners
Cross-border constraint	2 EU countries involved	>= 2 EU countries involved	Core team from >=1 EU country, mentor preferably from other EU country
Purpose	Focused, bilateral academia-to-industry technology transfer	(Multidisciplinary) broad technology transfer via productization partner	Evaluation of sustainable business potential, VC acquisition
Planned no. (by TETRAMAX consortium)	10	10	4
Planned no. (by 3rd parties)	20	10	12
Average TETRAMAX funding (EUR)	35,000	75,000	25,000
Expected total TETRAMAX funding	1,050,000	1,500,000	400,000

# Initial TTX specialisation fields

- To be “**encouraged**” within the open calls:

Specialisation field	TETRAMAX partners with key competence
SW development	UGENT, TECHMO, IT4I, UPC
HW customization	RWTH, AMGT, TUT, BME, PISA
Multicore design	RWTH, TUT, BME, TUM
Compiler technologies	TUDELFT, RWTH, UEDIN, THINKS, INRIA
IT security	RUB, CDS, UGENT, INRIA
Multimedia processing	TECHMO, THINKS, IT4I, BME, UZAGREB
Wireless communications	TUT, CDS, JSI, RWTH
MEMS	AMG
Positioning technology	TUT
Open Source data generation technologies	UPC, INRIA
Heterogeneous computing	BME, UZAGREB, INRIA
Reliability and dependability	TTU, INRIA
Human/Machine Interfaces	JSI, PISA

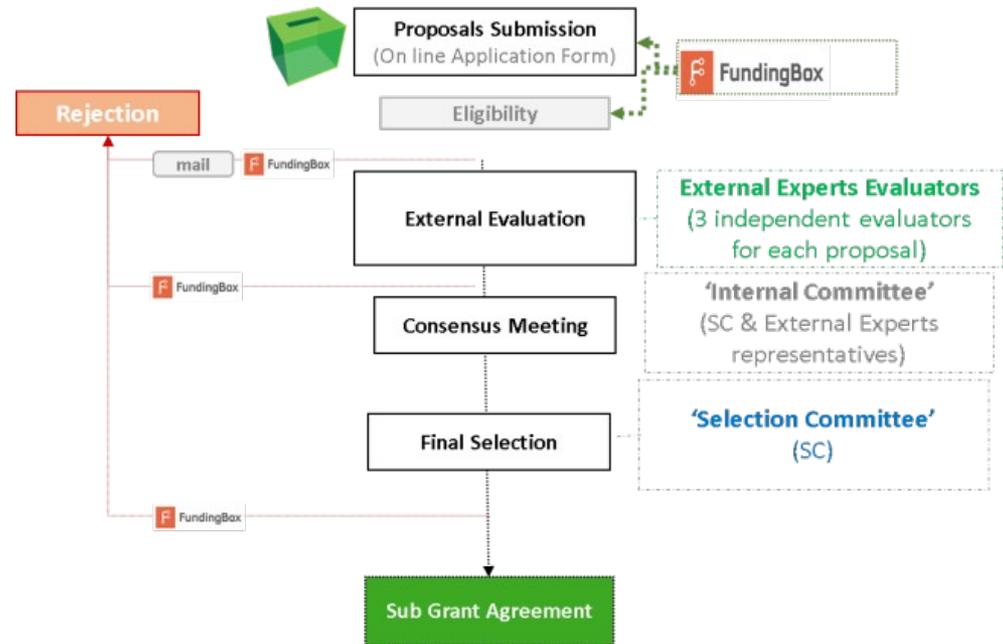
# Preliminary call schedule

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<b>TTX type</b>	<b>Call 1</b>	<b>Call 2</b>	<b>Call 3</b>	<b>Call 4</b>
<b>Bilateral</b>	<b>M3</b>	<b>M14</b>	<b>M25</b>	<b>M32</b>
<b>Value chain/interdisciplinary</b>	<b>M6</b>	<b>M16</b>	<b>M26</b>	<b>M32</b>
<b>Entrepreneurial</b>	<b>M12</b>	<b>M24</b>	<b>M36</b>	<b>-</b>

# TTX proposals evaluation and selection

- Based on FBOX platform
- Procedures precisely defined in DoA
- Take TETRACOM experiences into account



## Open Call Timeline



# Evaluation criteria

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- Type 1 and 2 TTX:
  - Impact
  - Soundness of concept
  - Quality of the consortium
  - Resources
  
- Type 3 TTX:
  - Market need
  - Approach
  - Benefit
  - Competition
  - Team

# Internal TTX

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- Plan: ~24 out of ~66 TTX carried out by TETRAMAX consortium partners (others by 3rd parties)
- TETRAMAX partners do not participate to open calls; they participate via pre-allocated, yet flexible, TTX budgets under the control of the coordinator and SC
- Pre-allocation: 6 PMs per partner (except FBOX and ZENIT)
- All partners have provided tentative TTX topics and collaboration partners in the proposal
- External review
- Approval by SC

# And many more activities...

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Competence  
center network  
(TUT)

**WP2**  
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# Contacts

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- General:
  - Rainer Leupers
  - [leupers@ice.rwth-aachen.de](mailto:leupers@ice.rwth-aachen.de)
- Finance and contracts:
  - Eva Haas
  - [Eva.Haas@zhv.rwth-aachen.de](mailto:Eva.Haas@zhv.rwth-aachen.de)
- French contact point:
  - Albert Cohen
  - [Albert.Cohen@inria.fr](mailto:Albert.Cohen@inria.fr)
- Communications:
  - Katrien Van Impe
  - [Katrien.vanImpe@ugent.be](mailto:Katrien.vanImpe@ugent.be)



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