


Rise to the Challenge

Opening and background

 Info event
21.4.2026



AGENDA

14:30 Opening and background, **Kari Komulainen**, Business Finland

14:40 Rise to Challenge call, targets and the process, **Karin Wikman** and **Virpi Mikkonen**, Business Finland

15:00 Case: On Chip Edge AI Neuromorphic Applications for Security, **Petriina Paturi**, University of Turku

15:20 Q&A

Read more about the Rise to Challenge funding call:

<https://www.businessfinland.fi/en/services/funding/calls/2025/rise-to-challenge-main-funding-call-2025/>

OPENING AND BACK- GROUND

Kari Komulainen

STRATEGY 2030 IN BRIEF

PURPOSE

BUSINESS FINLAND CREATES PROSPERITY AND WELL-BEING FOR FINLAND

by promoting the renewal and sustainable growth of companies and the diffusion of knowledge in society

GOALS

1

Record amount of productivity-enhancing private R&D and growth investments

2

A leap in the level of **ambition and innovation** collaboration

3

World-class prerequisites for renewing national strengths and creating new growth sectors

4

Confidence in our **impact, responsibility** and efficiency

CHANGE PROJECTS

Reforming our funding principles

Comprehensive reform of program activities

Digital transformation

Strategic advocacy and service collaboration

STRATEGIC GOALS

1

Record amount of productivity-enhancing **private** R&D and growth investments

2

A leap in the level of ambition and innovation collaboration

3

World-class conditions for renewing national strengths and creating new growth sectors

4

Confidence in our impact, responsibility and efficiency

STRATEGIC GOALS

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Record amount of productivity-enhancing private R&D and growth investments

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STRATEGIC GOALS

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A leap in the level of ambition and innovation collaboration

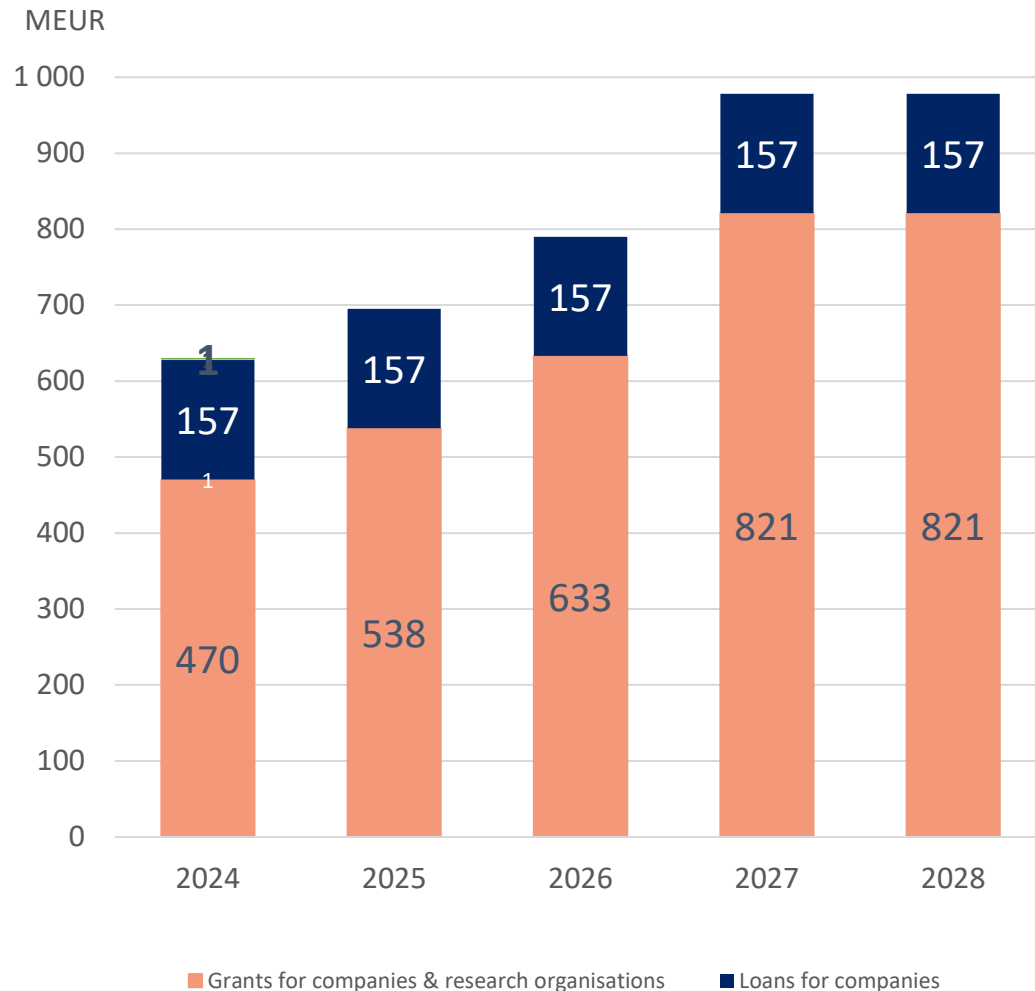
3

World-class conditions for renewing national strengths and creating new growth sectors

4

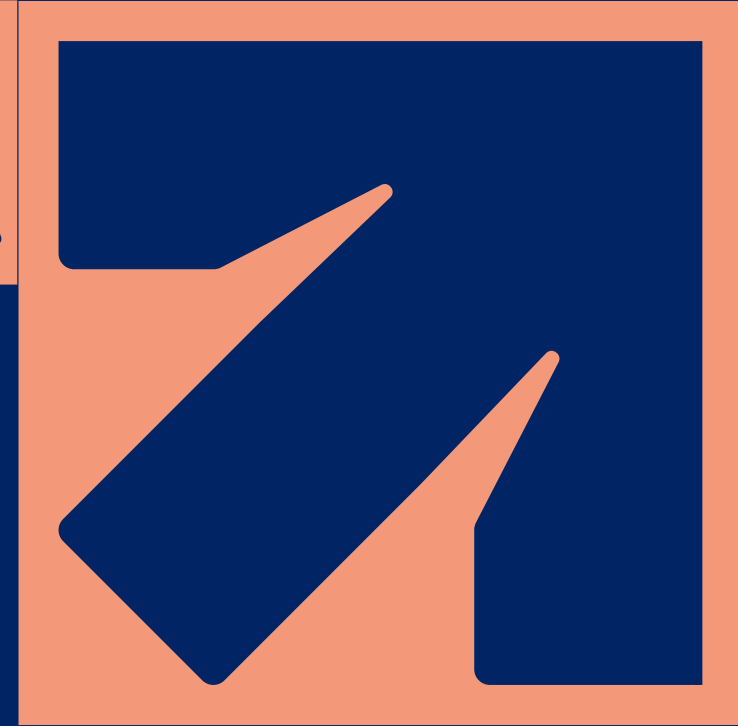
Confidence in our impact, responsibility and efficiency

BUSINESS FINLAND R&D FUNDING IS GROWING



Business Finland will allocate funding to

- Strategic thematic choices (e.g. Co-Research);
- R&D driven by needs of incumbent and new companies (e.g. Co-Innovation); and
- **World-class conditions for renewing national strengths (e.g. Rise to the Challenge)**



RISE TO CHALLENGE CALL: TARGETS AND THE PROCESS



Virpi Mikkonen ja Karin Wikman

RISE TO CHALLENGE, SHORT HISTORY

- Pilot Call 2025: Deadline March 2025
 - Theme: Digital solutions that promote safety and security and continuity of operations for the needs of the defense sector, critical infrastructure, society, and businesses.
 - Funding in two phases: 2 + 3 years (max funding 2 M€/the first phase, 3-5 M€/ the second phase)
 - 60 ideas were commented, 17 projects pitched and applied funding
 - A total of €10 million in funding was granted for the first phase of five projects.
- Main funding call 2025: Idea papers 26.8.2025 – 31.10.2025, full proposals 9.3.2026
 - No thematic restrictions
 - Funding in two phases: 3 + 2 years (max funding 3 M€ or 6 M€/the first phase, 2 M€ or 4 M€/ the second phase)
 - 186 ideas, of which 32 were invited to pitch. Full applications were requested from 16 projects, and 5–7 projects will receive funding.
 - Funding decisions in June 2026
- Annual call

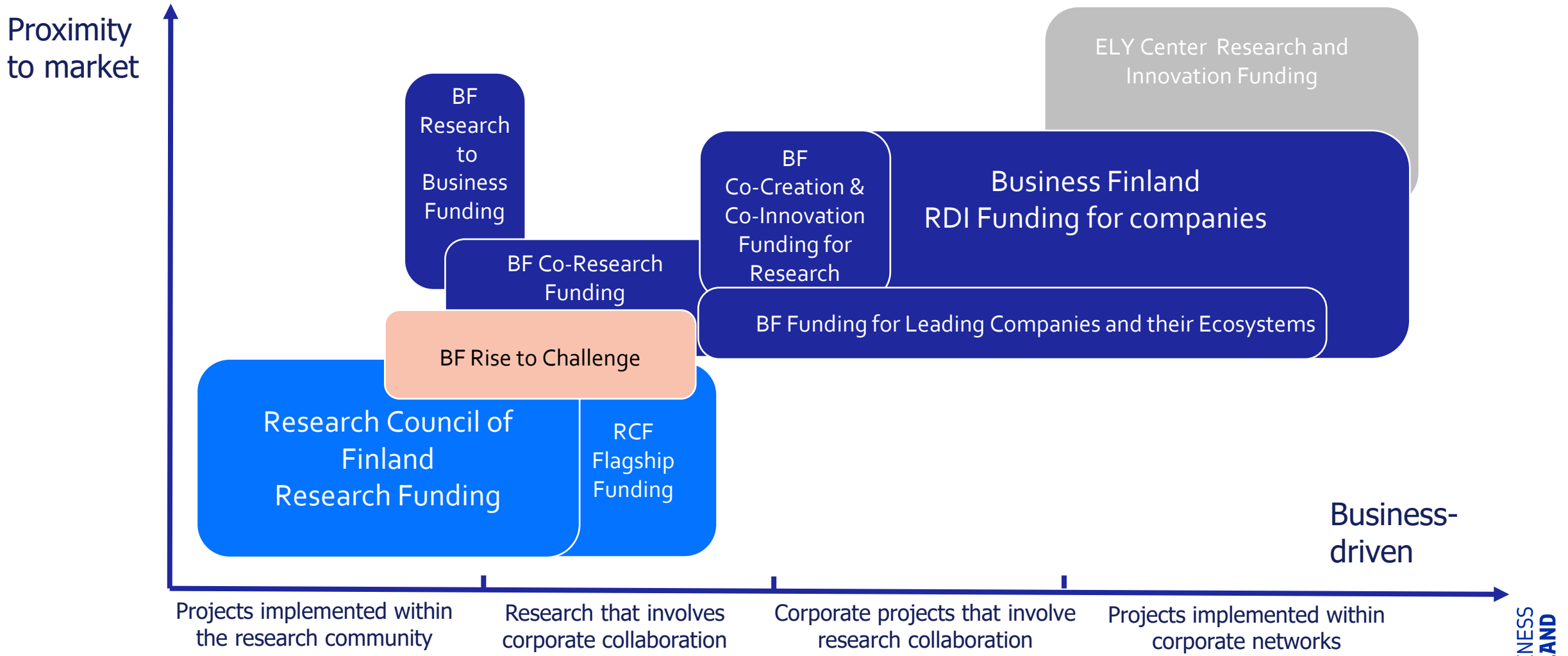
CALL OBJECTIVE: THINK BIG!



Mission-oriented goal setting: Research is used to **solve the great challenges of the future.**

- We are looking for **radical and unique breakthroughs** - new, creative, and market-disruptive research ideas.
- The productivity benefits and/or international commercial potential have been identified but they cannot yet be accurately assessed
- Company participation not required in the first project phase

RDI FUNDING



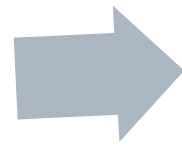
SUMMARY OF THE CALL PROCESS

- The call welcomes world-class ideas without thematic restrictions. The projects can be implemented in collaboration between multiple research organizations.
- **Idea call phase** is the competition of bold research ideas, deadline **Nov 3rd, 2026**
 - Concept level application focusing on challenge, impact and boldness/novelty of the idea
 - Send your presentation via [secure email](#). Enter “Näytönpaikka, **BFRK 3/35/2026** in the subject line.
 - Only the best project ideas will be invited to pitch their project in January 2027
 - The projects will be informed if they are invited to pitch by mid December 2026
- **The first three-year phase** is for doing research
 - Based on the ppt-deck and pitch the best ideas are invited to send full application (**DL 31.3.2026**)
 - Feedback will be given to sharpen the concept
 - 30 million euros has been earmarked for the first phase. We expect to fund 5-10 projects
- **A potential two-year continuation phase** is to ensure utilization of achieved results
 - The second phase depends on the results achieved in the first phase
 - No separate application needed (change decision)

SUMMARY OF THE CALL PROCESS

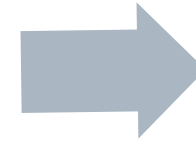
Call for ideas

- By 3 November 2026 standardised PowerPoint presentation of project idea to Business Finland Records office
- Max 20 pages



Pitching

- Project ideas that best meet the funding call criteria will be invited for further discussions
- Pitches in January 2027

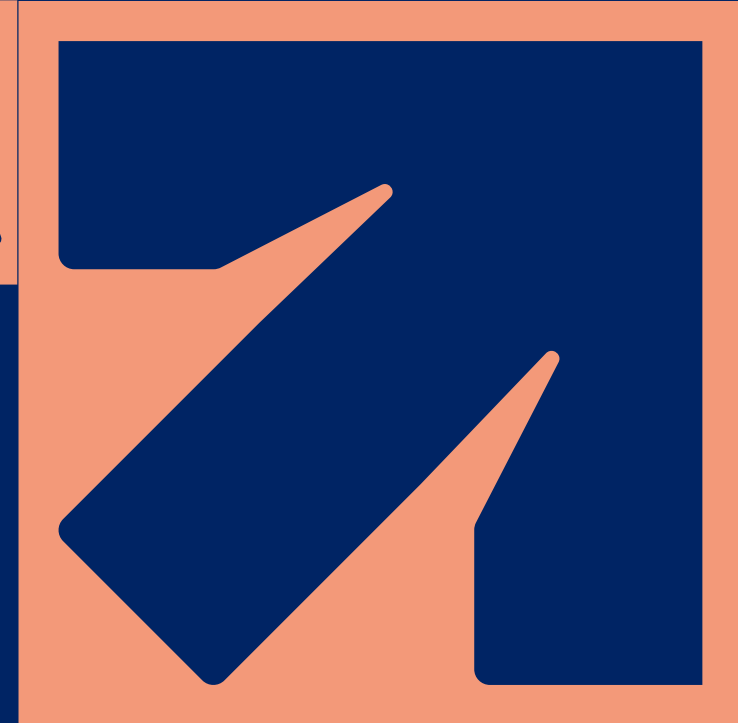


Application

- Based on the pitches some applicants will be recommended to submit a full application by 31 March 2027

PROJECT SELECTION CRITERIA

- Preliminary application phase:
 - Significance of the mission, uniqueness and novelty of the research idea.
 - Perspective on utilisation and business potential of the competencies generated through research. The relevance of the resulting expertise and outcomes to Finnish society.
 - Versatile expertise of the research group(s) in an international comparison, and the project leader's experience and leadership capability
- For projects invited to further discussions, in addition to the above:
 - Ambition level and quality of the project plan, and the plan for engaging the intended users of the results in the project
 - Initial resources and RDI capabilities, and their planned development
 - Development of the research project's national and international collaboration networks



IDEA CALL PHASE

DL 3RD NOV 2026



TEMPLATE TO PRESENT YOUR IDEA

Presentation of the project idea by 3 Nov 2026 and pitch agenda

This material must be submitted by **Tuesday, 3 November 2026 23:59** at the latest by sending a secure email to Business Finland records office at <https://secure.businessfinland.fi/suojaposti>. Enter "Näytönpaikka 2026 BFRK/3/35/2026" in the subject line.

Material in PowerPoint format, following the structure of the adjacent column. One joint presentation from the consortium. Maximum length **20 slides**.

Projects to be invited to pitching will be selected based on the material.

Tentative time allocation for a possible pitch is 30 minutes (in January), agenda:

- 15 minutes for presenting the project idea in line with the previously submitted PowerPoint set (the set can be modified before the pitch)
- 15 minutes for questions and discussion

1. Mission, Situation and novelty of the idea
2. Visualized Roadmap for 2020–2035
3. Impact and business case
4. Indicators
5. Team and Leadership
6. Project Content and Cost Estimate
7. Commitment of the Applicant Organisation

Subheadings may not be deleted or edited.

1. Mission and Situational picture

- A concise description of the mission. What challenge/future need will be met and what is the uniqueness, significance and relevance of the idea to Finnish society?
- What is the situation around the world and in Finland; what are the levels of expertise and skills gaps; are similar solutions being explored elsewhere?

2. Visualized Roadmap for 2020–2035

Visualize a roadmap for your idea for 2020–2035:

- What expertise does the project build on?
- What will be achieved during the project?

3. Impact

- Assess the impact of the project (e.g. impact on RDI investments / new skills and centres of expertise / theses / number of students in the field / employment / productivity / patents / clean transition / digitalisation / etc.)
- Present your view of the new business opportunities and users potentially arising from the research and the estimated time frame for utilising the results.

1. MISSION, SITUATIONAL PICTURE AND NOVELTY OF THE IDEA

- Concise description of the mission. What challenge/future need is being addressed, and what is the significance and relevance of the idea for Finnish society?
- Uniqueness and novelty value of the idea.
- What is the situation globally and in Finland – level of expertise and competence gaps, and are similar solutions being researched elsewhere? Alternative/competing approaches. What is Finland's competitiveness and targeted competitive advantage? Why is this a relevant topic for Finland?

2. VISUALIZED ROADMAP FOR 2020–2035

Visualise a roadmap for your idea for 2020–2035:

- On which competences will the project be built (2020–2026)?
- What will be achieved during the project (2027–2031)?
- Potential pathways for exploiting the results and the time frame for exploitation (from 2031 onwards).
- How might other scientific disciplines be brought in later; how is international cooperation planned to be built; what kind of stakeholder collaboration will be developed and how? What else, in addition to the Business Finland project, will be done to advance the topic, and how should the operating environment change?

3. IMPACT AND BROAD EXPLOITABILITY

- Assess the impacts of the project (e.g. impacts on RDI investments / new competences and competence clusters / theses / number of students in the field / employment / productivity / patents / the green transition / digitalisation / etc.).
- Present your view on the potential new business and users/beneficiaries arising from the research, and the estimated time frame for the exploitation of the results.

4. INDICATORS SET FOR THE FIRST PROJECT PHASE

Indicator	Objective & how to verify
Initial researcher resources and a plan for their development	<i>For example: by the end of phase 1 of the project, there are at least x new people in the research groups in total, of whom at least y are at postdoc level. Starting situation in winter 2026: a total of z people in the research groups.</i>
Progress in phase one towards the mission, i.e. implementation of the project in accordance with the roadmap and project plan	<i>Achievement of the project's most important results and how they are verified, 3–5 sub-items.</i>
Identification of exploitation pathways and evidence of the commitment of beneficiaries to the second phase of the research	<i>For example: At least X companies committed as partners for the second phase of the project; at least Y PoCs with companies; at least Z invention disclosures</i>
Optional indicator	<i>For example: at least X peer-reviewed scientific publications published or under review; at least Y international funding applications</i>

5. TEAM(S) AND PROJECT MANAGEMENT

- Describe the project team's / project teams' resources, capabilities, diversity and division of labour. Explain how the competences complement each other.
- Describe the level of expertise of the research group(s) in an international comparison. Describe the most significant national and international networks of the research group(s).
- Describe the project leader's capabilities and experience in managing large-scale projects.

6. PROJECT PLAN AND COST ESTIMATE

- Concise description of the project content and the roles of the different applicants, with an emphasis on the first three years of the project.
- Preliminary cost estimate by organisation and funding to be requested from Business Finland for the first 3 years (+ in brackets an estimate of the costs and requested funding for the possible two additional years).

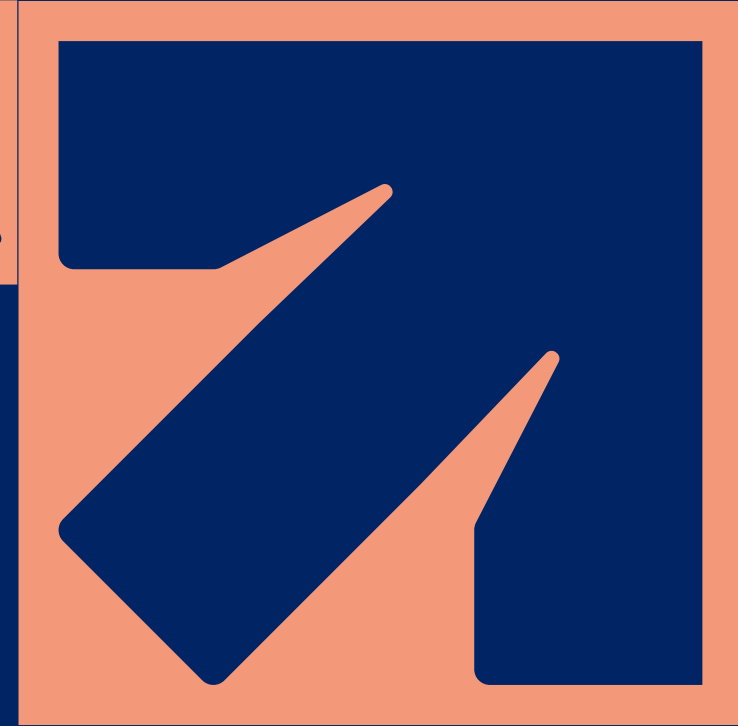
	Organisation x	Organisation y	Organisation z	TOT
Salary inc. overheads				
Other costs				
Total costs				
Requested funding (80 %)				

7. COMMITMENT OF APPLICANT ORGANISATIONS

- At the idea call stage, a separate letter of commitment is **not required**.
- In the PowerPoint presentation, describe the significance of the proposed research theme for your organisation. We want to understand that this is not merely the idea of an individual researcher, but that the organisation has broader expertise in this field and a willingness and commitment to, for example, increase resources over a certain period of time.
- Organisations that are invited to submit a full funding application must provide a statement from the organisation's management on how the organisation will commit to strengthening the relevant research field in addition to the project applied for. The format is free, but for example a separate letter of commitment is a good solution.

PITCHING

- Based on the PowerPoint-material, the most promising research ideas will be selected for pitching their project to Business Finland.
- Those invited to pitch their project will be sent a link to book a discussion time (mid December). The pitches will be presented to BF's experts in January 2027.
- The ppt-presentation material can be modified for the pitching.
 - Agenda: 15 min presentation + 15 min Q & A
- At this phase, the project team must demonstrate how the research organization is committed to the project and strengthening the research team.
- Feedback on pitches will be provided no later than Feb 19th .



**APPLICATION PROCESS
FOR PROJECTS
RECOMMENDED TO
SUBMIT A FULL
PROPOSAL 31ST MARCH**



THE FIRST PROJECT PHASE

- The maximum duration of the first project phase is three years
- Max amount for the first phase is up to **3 M€ per organization or 6 M€ for a consortium (budget 3,75 M€ or 7,5 M€)**
 - The funding rate is 80 %
 - Company involvement not expected, companies can be engaged during the project.
- The first project phase:
 - the research plan is implemented
 - research resources are assembled and strengthened
 - interdisciplinary research needs are defined and cooperation is organized, for example with social sciences, humanities and creative fields, and international research networks are reinforced
 - companies that will utilize the research results in their own R&D are committed to the project's second phase, and other potential exploitation paths for the research are outlined
 - the research plan for the second phase is refined during the project
- Steering group helps in achieving the project results and ensuring their broad exploitation: (international) top researcher(s) / authorities / legislation / developer(s) of enabling technologies

FIRST PROJECT PHASE, APPLICATION

- Based on the January pitches and the PowerPoint deck, the most promising research ideas will be recommended to submit a full application
- **Deadline for applications March 31st, 2027**
 - The full application must be completed in Business Finland's online service by 31 March 2027 (<https://www.businessfinland.fi/en/for-finnish-customers/online-services>)
 - Select **Co-Research** as the funding service. You do not need to include "Notifications of Participation in the Project" forms in the application.
 - Select "**Näytönpaikka**" from the drop-down menu under "Programs and other Related Links". Enter a name for your application in the following format: "**Näytönpaikka – project name**".
 - Prepare your project plan on a separate [project plan template](#) and attach it to your application.
 - Joint projects have a common project plan covering all parties' activities
 - Each research organization submits its **own application in the e-service**
 - Parties must use the same project name in their application

FIRST PROJECT PHASE, APPLICATION PROJECT PLAN

- Use the project plan template
- The template has the same structure as the PowerPoint deck you have submitted earlier
- Describe the first three years in more detail and the following two years at a more general level
- The funding decision for the second phase depends on the results achieved in the first phase (**indicators** set in the Project Plan, Chapter 2.2)

RISE TO THE CHALLENGE 2026: Project name

COVER SHEET – SUMMARY

PROJECT NAME

Public summary in Finnish and English

Max 2000 (FI) + 2000 (EN) character summary of the project's main content and objectives

DURATION OF THE FIRST PHASE OF THE PROJECT (3 years): xx.xx.2027 – xx.xx.2030

DURATION OF POTENTIAL EXTENSION PHASE (2 years): xx.xx.2030 – xx.xx.2031

FUNDING REQUESTED FROM BUSINESS FINLAND FOR THE FIRST PHASE OF THE PROJECT (total for all parties to a joint project + share of each party)

- Total estimated costs and costs per party (€):
- Total funding requested from Business Finland and per party (€):

ESTIMATE OF FURTHER FUNDING REQUESTED FROM BUSINESS FINLAND IN THE SECOND PHASE OF THE PROJECT

- Total estimated costs (€):
- Total funding requested from Business Finland and per party (€):

INDICATORS, CHAPTER 2.2

Indicator	Objective & how to verify
Research resources at the starting point and a plan for their development	<i>For example: by the end of phase 1 of the project, there are at least x new people in the research groups in total, of whom at least y are at postdoc level. Starting situation in winter 2026: a total of z people in the research groups.</i>
Progress in phase one towards the mission, i.e. implementation of the project in accordance with the roadmap and project plan	<i>Achievement of the project's most important results and how they are verified, 3-5 sub-items.</i>
Identification of exploitation pathways and evidence of the commitment of beneficiaries to the second phase of the research	<i>For example: At least X companies committed as partners for the second phase of the project At least Y PoCs with companies At least Z invention disclosures</i>
Optional indicator	<i>For example: At least X peer-reviewed scientific publications published or under review At least Y international funding applications</i>

INDICATORS, CHAPTER 2.2

- The weight of each indicator is 25 %. The actual value of each indicator can range from 0 to 25 % (for example, if 8/10 recruitments are realised, the indicator value is 20 %). The actual values of the various indicators are added together. In order to be eligible for further funding, at least 75% of the total target set must be achieved.
- For example:
 - Indicator 1: 10/12 researchers recruited: 20.8 %
 - Indicator 2: all substantive progress objectives achieved: 25 %
 - Indicator 3:
 - 3/5 intended users engaged: 7.5 %
 - 2/3 invention disclosures: 8.3 %
 - Indicator 4: 6/8 international applications: 18.8%
- Total 80.4 %; second phase ok.

PROJECT COMMUNICATION AND DISSEMINATION

- Rise to Challenge projects are high profile projects and we expect efficient communication and visibility of the funded projects
- One work package should focus on project management and communication
 - A communication and dissemination plan is expected



FROM PHASE 1 TO PHASE 2

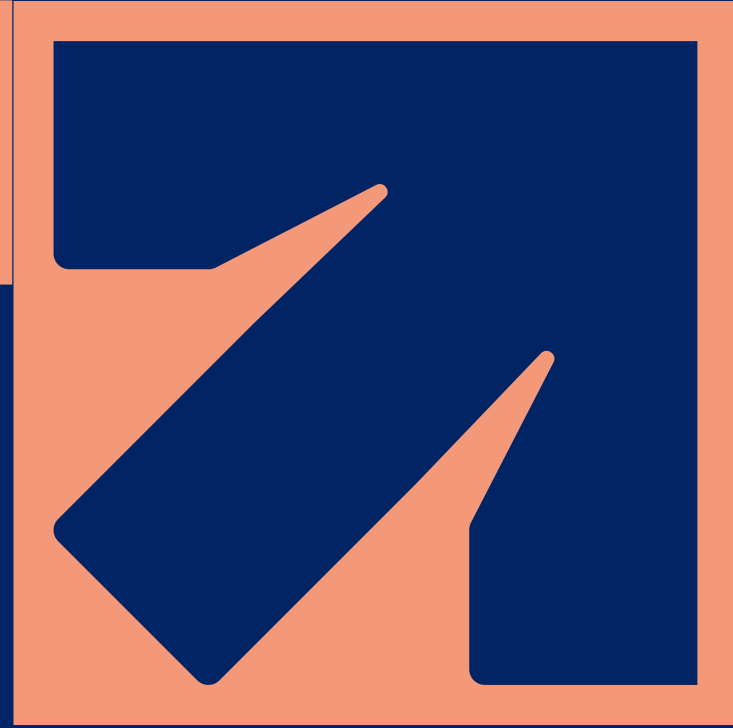


FROM PHASE ONE TO PHASE TWO

- The funding decision for the second phase of the project depends on the results achieved in the first phase. As a rule, the set indicators must be achieved.
- No new application needed
 - If funding is granted for the second phase, the continuation decision will be made as a change decision to the project plan and budget, and no new funding application will be required.
 - In connection with the reporting of the first phase, the applicant must, in addition to the report, submit a more detailed plan and cost estimate for the project's second phase.
 - The plan must include the refined objectives for the second phase.

THE CONDITIONAL SECOND PROJECT PHASE

- The maximum duration of the second project phase is two years.
- Maximum additional amount for the second phase is up to **2 M€ per organization or 4 M€ for a consortium (budget 2,5 M€ or 5 M€)**
 - The funding rate is 80 %
 - Potential utilizers of the results should participate in project steering
- The research will proceed according to the specified plan.
- Further utilization pathways will be identified, and links to the business community and other stakeholders will be strengthened further.
- Applying for international research funding and building the necessary international networks.



SUMMARY



SUMMARY OF IMPORTANT DATES

- Submit your project idea (use the presentation template) by **November 3rd, 2026**
- Only a few project ideas will be selected for pitching
 - Selected projects will receive a calendar invite for pitching
- **Pitches in January 2027**
 - Projects recommended to submit full proposal will be informed by mid February
- Deadline for full proposals **March 31st, 2027**

RISE TO CHALLENGE SUMMARY

- Idea phase
 - Think Big! Convince us about your mission and the impact of the project
- The first project phase, three years
 - Carry out high impact research
 - Expand your networks
 - Achieve the agreed KPI's
- The second project phase, two years
 - Ensure broad utilization of the knowledge created in the project
- Throughout the project: communicate your work actively

FOR INSPIRATION

- Funded pilot call projects
 - <https://www.businessfinland.fi/en/whats-new/news/2025/the-first-rise-to-challenge-projects-selected>
- Breakthrough results from NeoCarbon project (in Finnish)
 - <https://www.businessfinland.fi/ajankohtaista/caset/2025/nain-syntyi-uusi-maailma-neo.carbon.energy>

The funded Rise to Challenge projects from the pilot call

ANSE: AI Native Software Engineering
Tampere University, University Of Jyväskylä

The ANSE project is developing a completely new AI-native software engineering methodology. It combines generative AI, process modeling, multimodal interaction, and real-time business monitoring into a single, unified framework.

HUSKI: Protected Critical Infrastructure Against Hybrid Threats
Turku University of Applied Sciences,
University of Turku, University of Jyväskylä,
Jyväskylä University of Applied Sciences

The mission of the HUSKI project is to address the challenges posed by hybrid threats to ensure the stability of society, particularly the functionality of critical infrastructure. The project tackles the highly complex challenges arising from the broad spectrum of hybrid threats.

Oceanaut: On Chip Edge AI Neuromorphic Applications For Security
University of Turku

The OCEANAut project explores and develops the next generation of highly energy-efficient neuromorphic computing systems for security and defence applications.

REINFORCE: Automatic Detection And Correction Of Industrial Design Flaws – Toward Fail-safe Industries
Tampere University Foundation, University of Helsinki, University of Jyväskylä

The goal of the REINFORCE project is to make a significant breakthrough in industrial design. It aims to revolutionize the early-stage design process by leveraging robotics and cyber-secure solutions through a novel neuro-symbolic AI application

Telequant
Tampere University Foundation, VTT, Aalto University Foundation

The objective of the TeleQuant project, "Telecom-Wavelength Quantum Communication with On-Demand Quantum Light Sources", is to develop key components and systems for quantum communication technology.

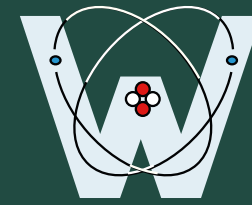
CASE:

**CHIP EDGE AI
NEUROMORPHIC
APPLICATIONS
FOR SECURITY**

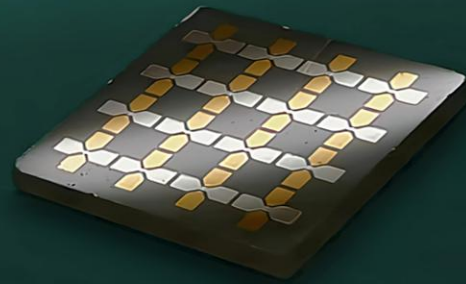
Prof. Petriina Paturi
University of Turku

OCEANAUT

On-Chip Edge AI Neuromorphic Applications for Security



Memristors and
Neuromorphic
Computing @UTU
utu.fi/memristors

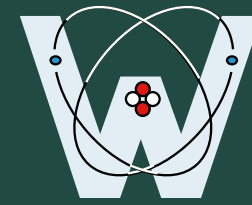


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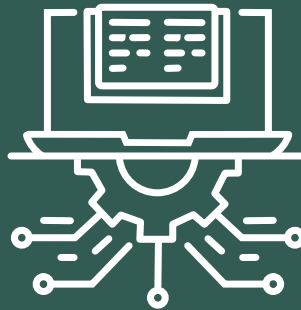


AI Problem



Cloud
dependent

Pre-trained



GPT
20 GW

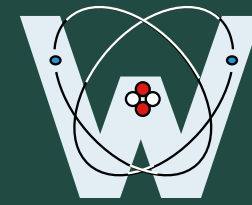


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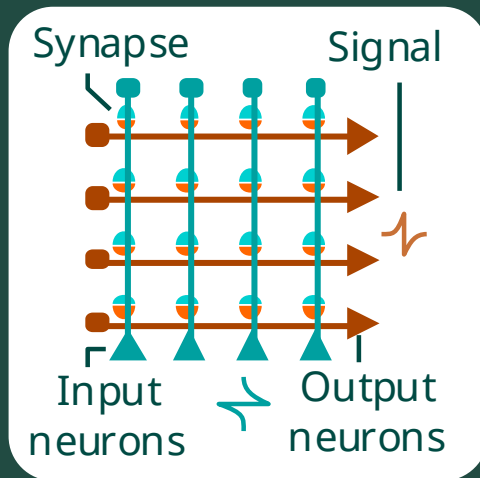


AI P

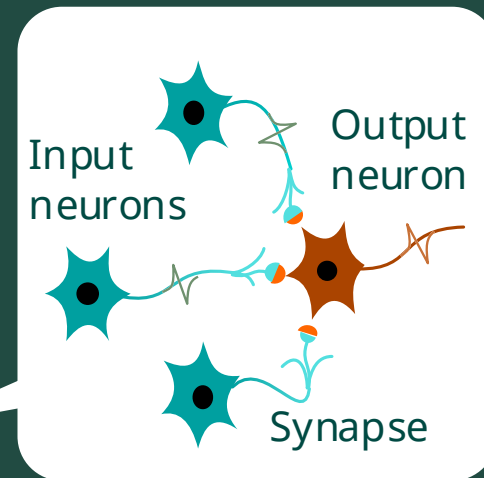
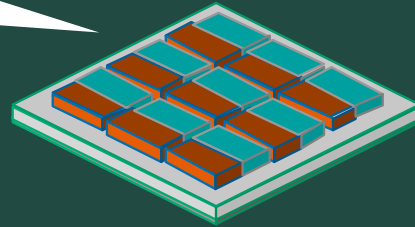


Cloud
dependent

Solution Neuromorphic computing



Memristors
20 kW



Brain
20 W

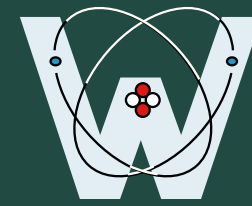


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On-Chip Edge AI Neuromorphic Applications for Security



Memristors and
Neuromorphic
Computing @UTU
utu.fi/memristors



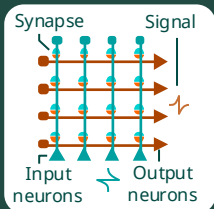
Technology Memristors

AI P

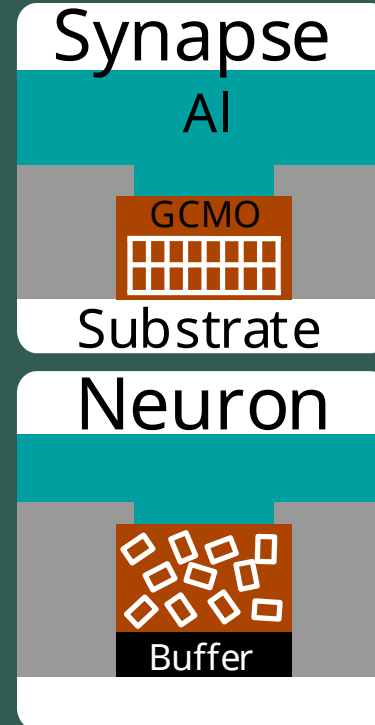
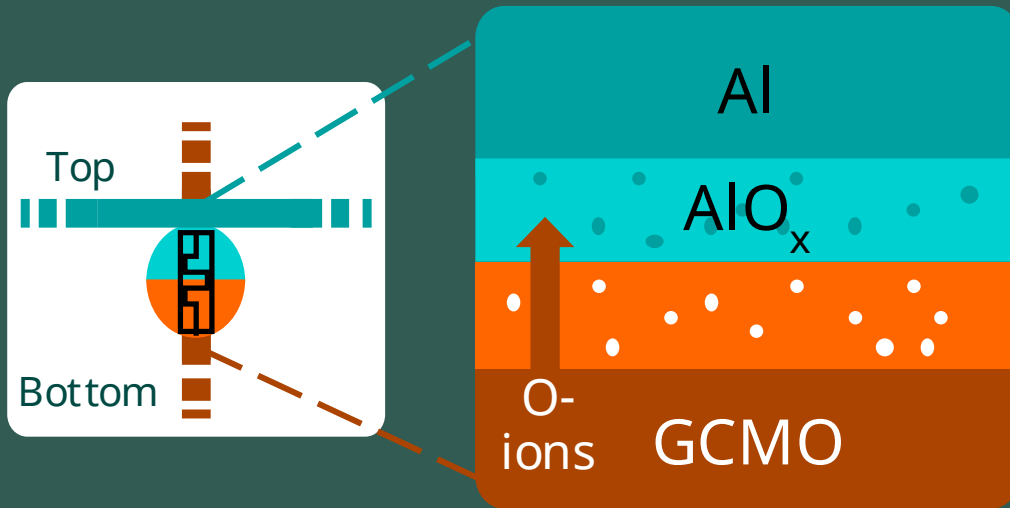


Cloud
dependent

So
Neuromor



Memristors
20 kW

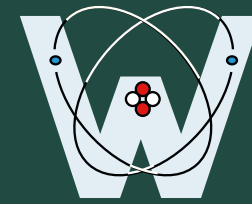


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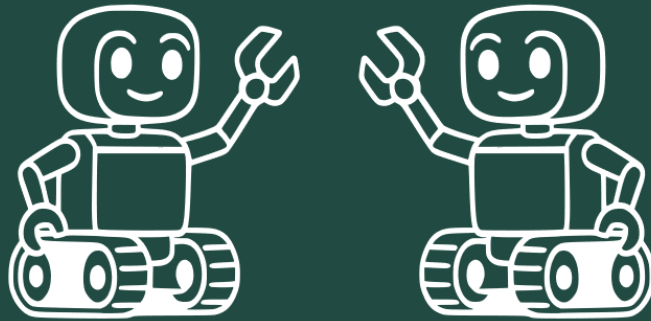
On-Chip Edge AI Neuromorphic Applications for Security



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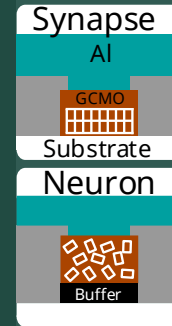
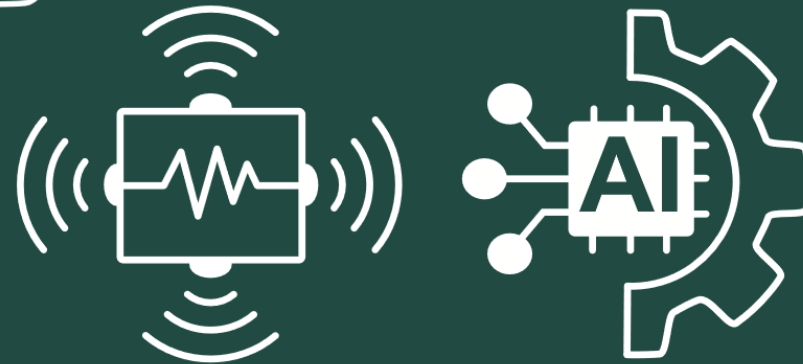


Proof-of-concepts



Autonomous
robots

Smart
sensors



AI Pr

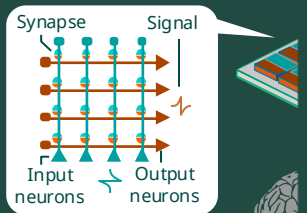


Cloud
dependent

Pre



Solu
Neuromorp

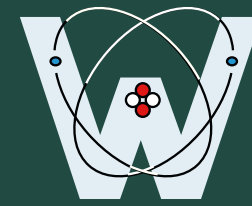


Memristors
20 kW



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Memristors and Neuromorphic Computing @UTU
utu.fi/memristors



SUOMEN AKATEMIA

BUSINESS FINLAND



UNIVERSITY OF TURKU

AI Problem

Cloud dependent

Pre-trained

GPT 20 GW

Technology

Memristors

Synapse AI

Substrate

Neuron

Buffer

Solution

Neuromorphic computing

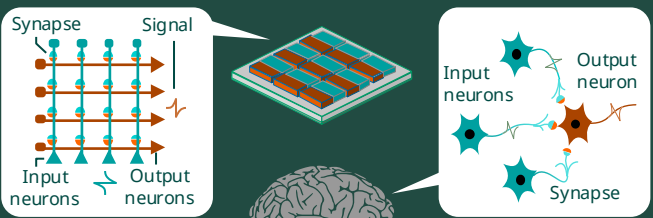
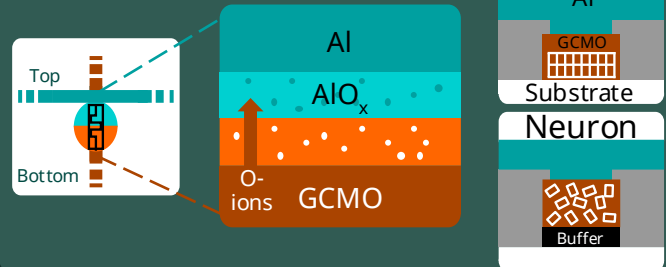
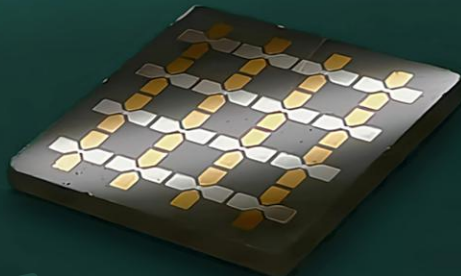
Memristors 20 kW

Brain 20 W

Proof-of-concepts

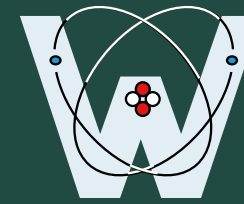
Autonomous robots

Smart sensors



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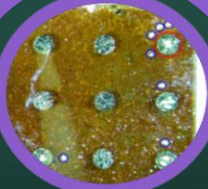
2020

2025

2030

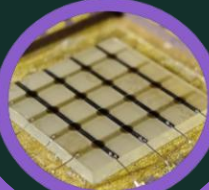


Basic research (RCF)



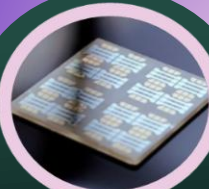
40+ publications
4 PhDs

BF R2B



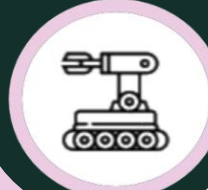
ICT 2023 (RCF)

Innovation
awards

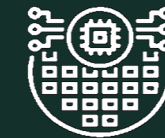


BF Rise-to-challenge

Industry
engagement



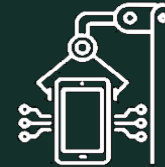
EIC, EU, EFD, NATO



Upscaling

Private funding

Production
line



Products on market

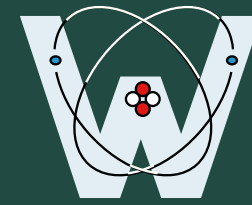


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9 new members
to the team



Engaged 8 Finnish
companies



Project 2 Year
Continuation
criteria



Proof-of-concepts

European
Innovation
Council



Applied EU or
similar funding



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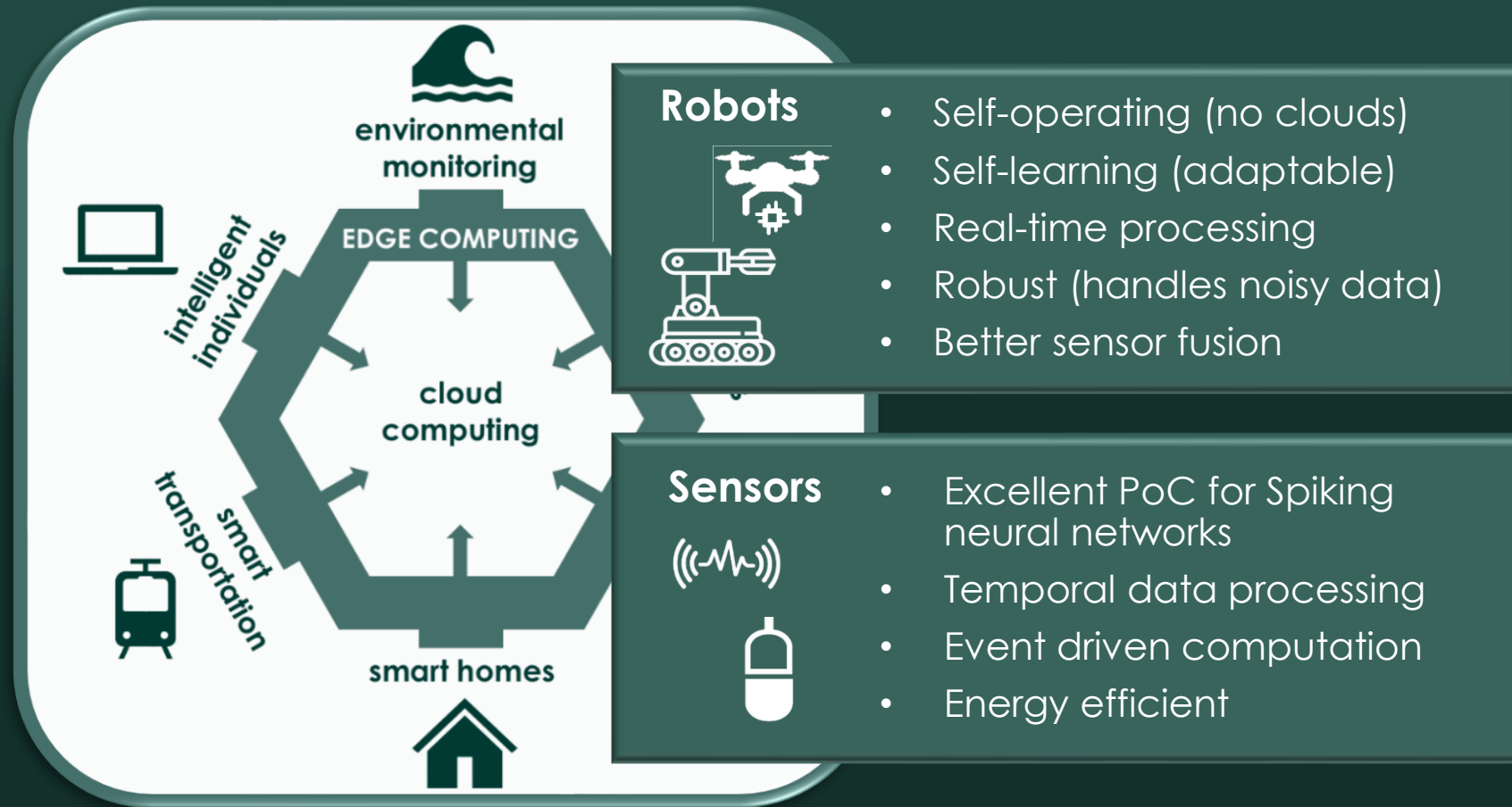


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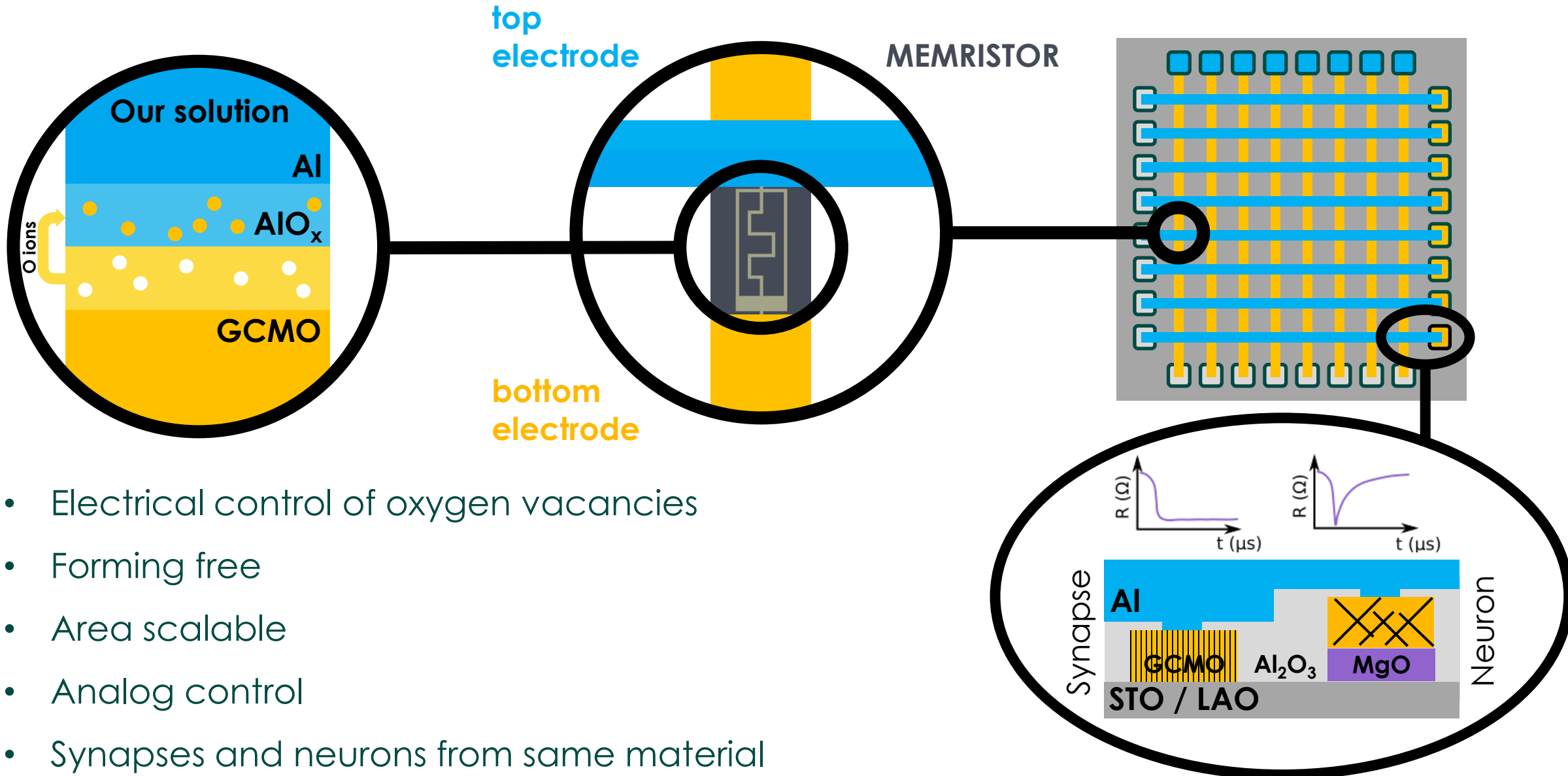
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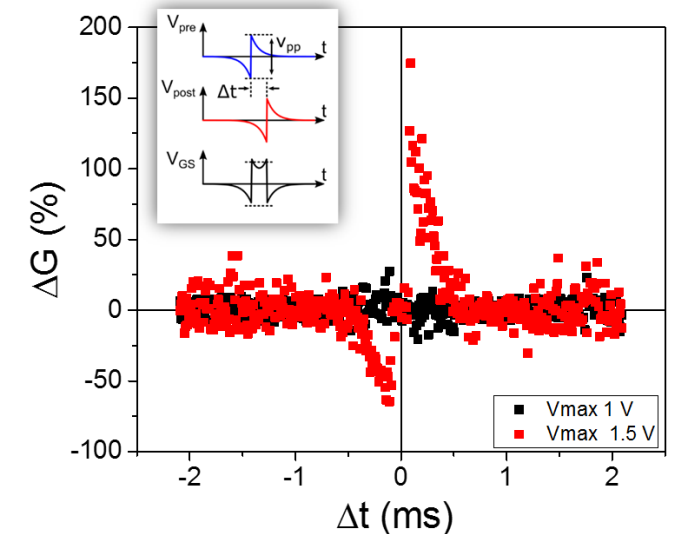
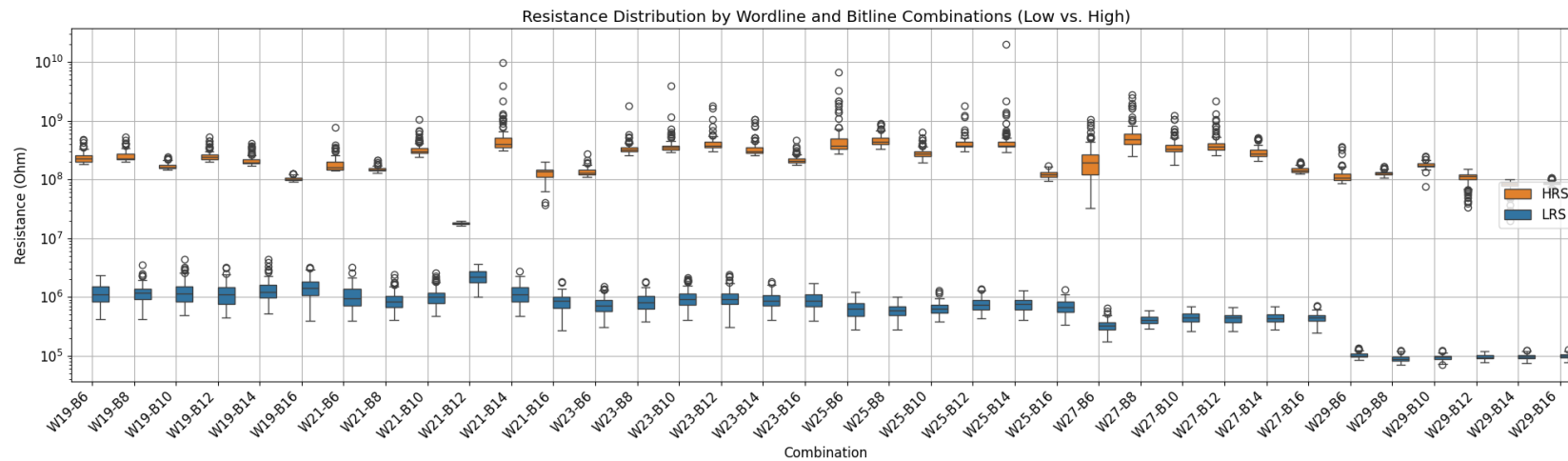
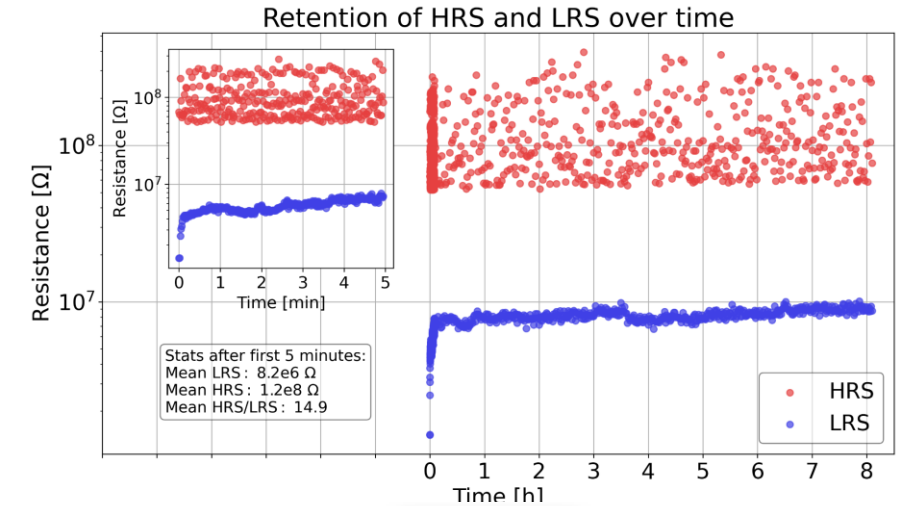
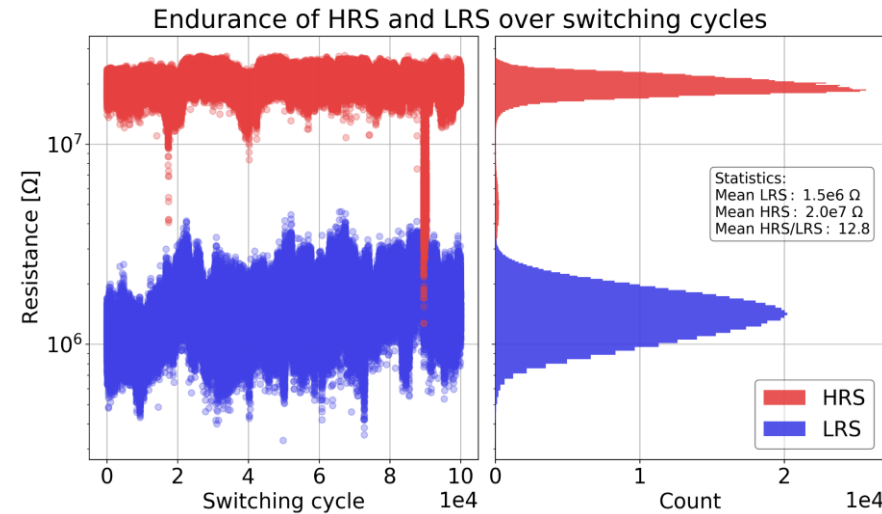
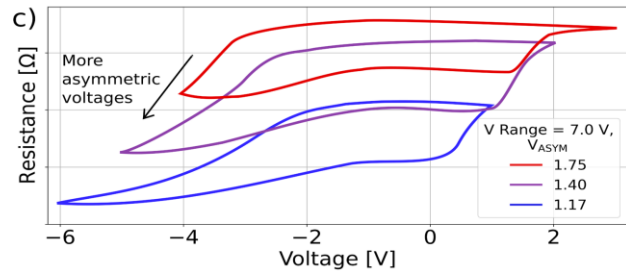
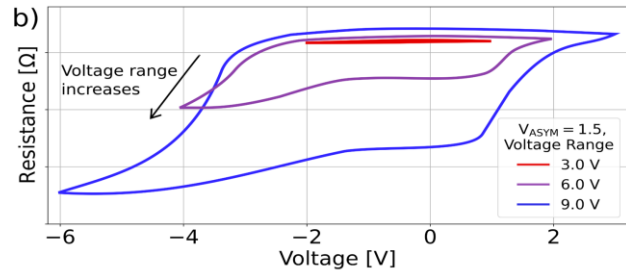


Technology



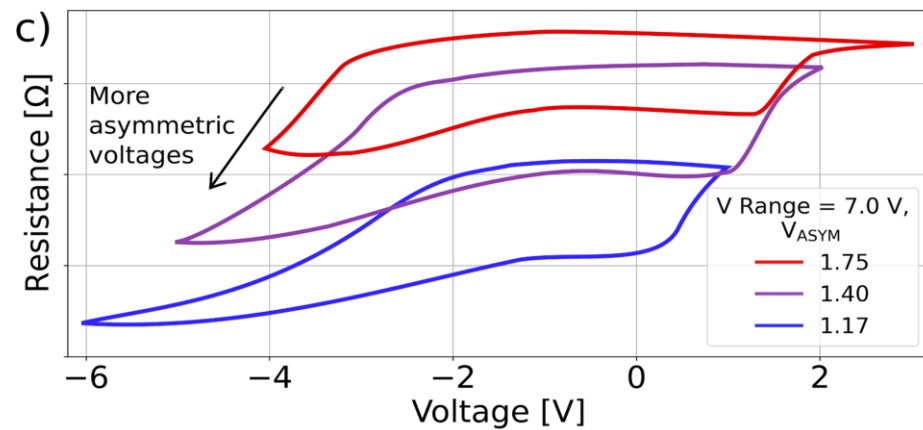
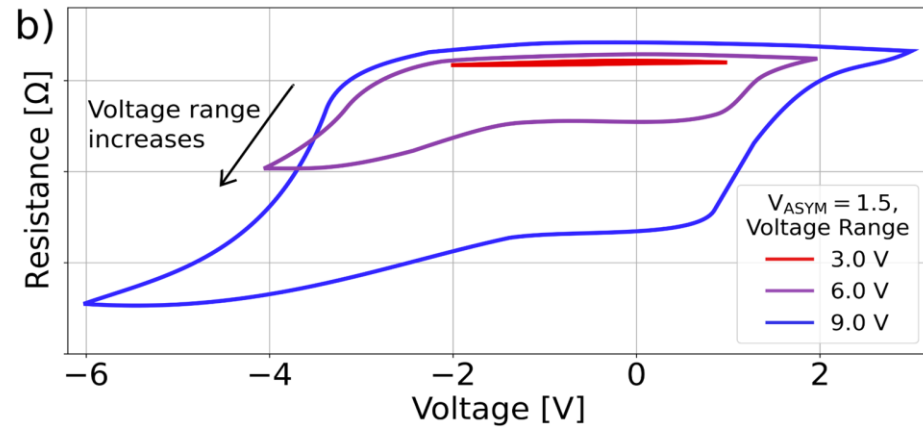
Performance of the Devices

Excellent yield and properties

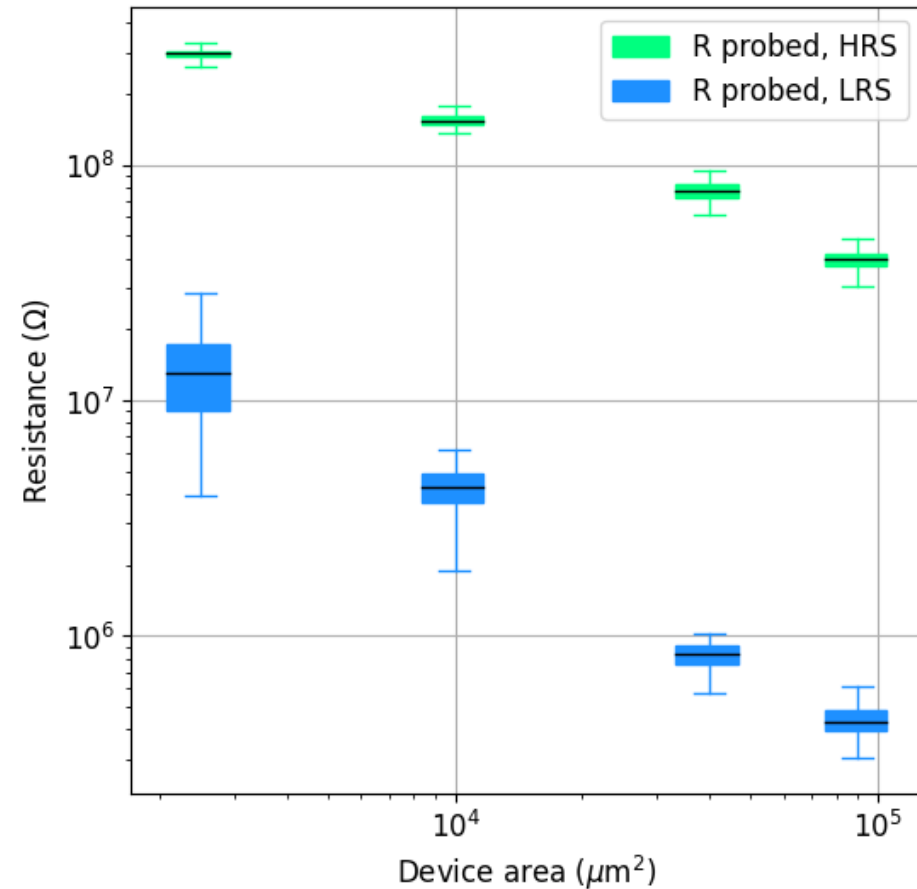


Performance of the Devices

Analog control



Area dependent switching



Q&A



THANK YOU!



<https://www.businessfinland.fi/en/services/funding/calls/2026/rise-to-challenge--funding-call-2026/>