Connected Excellence in Research

ERCIM strategy 2022 - 2027

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For more than 30 years, ERCIM has been successful in bringing together leading research institutes in the EU. Now, times are changing, and the digital revolution of society is at a high and ever-increasing speed. We thus asked ourselves several questions. What kind of organizations are the modern ERCIM institutes? What should be the modern role of ERCIM in current times, and how can ERCIM play its role? The result of the above questions is the start of an ERCIM strategy that targets several areas, as listed below. First, however, a look at how the world has changed since ERCIM was founded in 1988.

The new landscape

The age of digitization has brought a revolution in society and science. On the one hand, communication between people (private, industrial, academic) goes faster than ever, while on the other hand, many parts of society are automated and major further developments are yet to come.

For science, this has twofold consequences as well. On the one hand, collaborations and networks are easily formed and maintained. This leads to the existence of many, often ad-hoc, agile, and narrow-focused, networks that target specific topics. The number of networks thus increase drastically, and therefore, longer-existing networks like ERCIM become less unique. On the other hand, computer science and mathematics are faced with a highly dynamic and often disruptive landscape of research topics, let alone the demand from society. The main focuses of computer science and mathematics drastically change every 5 to 10 years, though in a natural fashion. However, every time, new focus areas are advocated as being extremely prospectfull, where networks, activities, and organisations are built up from scratch in a highly enthusiastic and focussed way and often as a reinvention of the wheel.

As a counterpart, we have ERCIM institutes that perform high-quality and mission-focussed research in selected areas, that are able to concentrate on a dynamic set of tomorrow's challenges being relevant to industry, society, and/or science, and that base a substantial part of their operations on a permanent skilled set of experienced and agile researchers. The network of ERCIM institutes thus combines anticipation and dynamics with experience and excellence. This makes them stand out in a world full of emerging networks. They anticipate on and participate in new research areas, while having experience in the dynamics of research strategies and having excellent researchers at their disposal. This unique position of ERCIM in the world of computer science and mathematics is our strength, which will be further enforced and utilized in the upcoming period.

Below are several ways to capitalize on these strengths, categorized into "The Core" and "The Services".

Our members: ERCIM and the ERCIM institutes

ERCIM caters to "institute-like organizations". From the start of ERCIM, in 1988, to now, the character of ERCIM members has diversified. To begin with, they are not all organized in the same way, ranging from larger limited-liability companies, to centres at universities or associations of several smaller bodies. And they range from rather application-driven to more fundamental research. However, they all do things that institutes traditionally do: They perform high-quality and mission-focussed research in selected areas, they concentrate on tomorrow's challenges being relevant to industry, society, and/or science, and they base a substantial part of their activities on a permanent skilled set of experienced researchers. ERCIM institutes have the ability to create meetings and meeting spaces that connect academic ideas, practical experience and good minds with each other and with politicians and industrialists looking for solutions. They can develop road-map documents and bring people together in workshops. They can provide resources and safeguard quality. In short, they can pool unique resources in a uniquely efficient and experienced way. As members, they also share goals and visions, and they can make the voice for these stronger by more active coordination and participation. Given this,

- ERCIM should communicate what modern institutes actually are and show the importance of what they do.
- ERCIM institutes should team up to
  - professionally envision future challenges and trends in research,
  - advice and have influence on the EU research agenda and funding, and
  - provide impact in the EU dissemination of research results.

  This is described in the following points.

Trends and challenges in research

Institutes are at the front of science and technology and have to determine future challenges and trends, constantly staying one step ahead. Given the high speed of the digital revolution in science and society, cross-fertilization between visions and expertise of different institutes and visionary people can be of increasing support, to the individual institutes as well as in our role to the EU Commission. ERCIM could do this e.g. via

- Organizing visionary events with a mix of researchers and management that look into the future, like (semi-)annual events or ad-hoc tasks.
- Work on road-maps, white-papers and encourage the formation of communities around (new) research challenges.
- Advise the EU and other bodies in future research directions.
- Initiating new working groups and networks around new research challenges.
- Promote exchange of staff and collaboration between institutes and across different domains to identify and address upcoming challenges.

Advice and influence towards the EU

The ERCIM institutes are prominent, especially in their own countries, but will still benefit from having a common position towards the EU. And also, the EU can benefit from the knowledge, visions, and expertise of the ERCIM institutes gathered in the ERCIM organisation. Coordinated message are simply much more efficient, while the synergy between ERCIM institutes can assure the quality of such messages. There are many organizations similar to ERCIM that act on this arena, and several of the

institutes have their own representation in Brussels. However, the particular combination of the focus on computer science and mathematics, the hands-on approach of institutes, and the combination of anticipation and dynamics with experience and excellence, puts ERCIM in a unique position for robust messages and advising. Our message is important and we have the track record to prove it.

- Goals can range from influence and advice regarding EU topics of (funding of) research and development to advising on societal or industrial issues concerning the digital revolution. We can act quickly and immediately to address challenges. We will investigate what are relevant goals and set up ways to coordinate.
  - o Advising the EU regarding topics of (funding of) research and development, based on our vision, agility, quality, and broad experience.
  - o Advising the EU on societal or industrial issues concerning the digital revolution.
- There is also an advantage of such coordination to the individual institutes in their own country, in the ability to point to success stories, important activities, and examples of how things have been done in other countries. By sharing information, we thus create a strong capability to promote our area.

Executive partnerships and projects with the EU

ERCIM institutes together perform high-quality and mission-focussed research in various areas, are able to concentrate on a dynamic set of tomorrow's research challenges, and have experienced, excellent, and agile researchers. This puts ERCIM in the position of being of high value to the EU for executive partnerships and projects, and vice versa. Important aspects can be envisioned as:

- Advancing the digital sovereignty of the EU.
- Becoming an executive research and project partner of the EU for various important research topics, based on experienced, excellent, and agile researchers.
- Organising (combined) dissemination and matchmaking events in important research topics, involving e.g. active (EU) projects that can thus disseminate, ERCIM working groups that can gather, industry which can learn, senior and junior researchers that make matches, and (EU) policy makers that can learn and inform.
- Attracting (EU) funding for ERCIM activities.

THE SERVICES

Services to ERCIM members

Next to the above core of ERCIM and its ERCIM members, several important services and benefits to ERCIM members and their surroundings are targeted. These are described in the sequel paragraphs, where some of them are already shortly described here:

- ERCIM aims to help new institutes find their ways of working and help them get established.
- ERCIM nourishes the successful ERCIM news in good shape, both in an online and in a printed version.
- ERCIM needs to regularly take a fresh look at its services to members, its ways of communicating, and its membership criteria.

Talent and expertise

A successful function of ERCIM has been to attract talent to its members and to Europe through the Alain Bensoussan fellowship programme. What we also see is an obvious need to nurture and manage talent within our institutes.

- We need to attract the star researchers that form the centres of communities. By providing broad, connected research environments, we can provide an attractive proposition beyond a mere salary to star researchers, within and outside of the EU.
- An important issue to attract talent is a clear and active handling of diversity and inclusion. This has become an prominent condition for working conditions. In addition, it has been shown that the younger generation chooses an employer much more based on these characteristics.
- Getting younger people involved in ERCIM activities as a means to both build a strong Europe and a strong ERCIM appears to be eminent, while it at the same time helps ensuring the younger generation's excellence in research.
- As an example activity, we have identified the need for a one+one year exchange programme between the institutes, that enables better collaboration between institutes and avoids the risk of institutes feeling they risk losing their researchers to the receiving institute.
- Promoting visits to other institutes and sharing and debating views with peers facilitate researchers and institutes in their activities, in building of (new) expertise, and in visions.

Start-up support

A role that institutes have shown that they are particularly suited for is creating spin-offs and other start-ups. They often have a high rate of success, compared to other organisations, and their spin-offs have distinctive characters compared to others. This is an important function in creating innovation and thriving eco-systems in Europe. Where ERCIM can make a difference is in helping start-ups that are already supported by an institute in their home country, to get traction in a country of another ERCIM institute. We have started-up this kind of start-up support.

Best practice

With the legal and practical challenges of operating under rules for EU funding, state-aid rules, procurement rules etc, comes many headaches. There are ample cases where skilled administrative handling is necessary to carry ideas to successful completion. After a number of cases on a person-to-person basis, ERCIM believes that creating a network or forum for administrative, Grants-office and legal functions in the member institutes would be very helpful. An idea is to model it on the existing ERCIM task group on Human Capital.