



NextGen
Next Generation Triggers

Outreach (WP4.1) and Education Programmes (WP4.2)

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with support from IT Communication and Outreach team



NextGen
Next Generation Triggers

WP 4.1: Outreach (/ 'aʊtri:tʃ /)

- The activity of providing services to any population that might not otherwise have access to those services ... (Wikipedia)
- Three axis, three levels of information:

Within the project

Information dissemination towards members of the NGT project

Outside the project

To the HEP community or persons involved in projects requiring event-selection (trigger) technologies

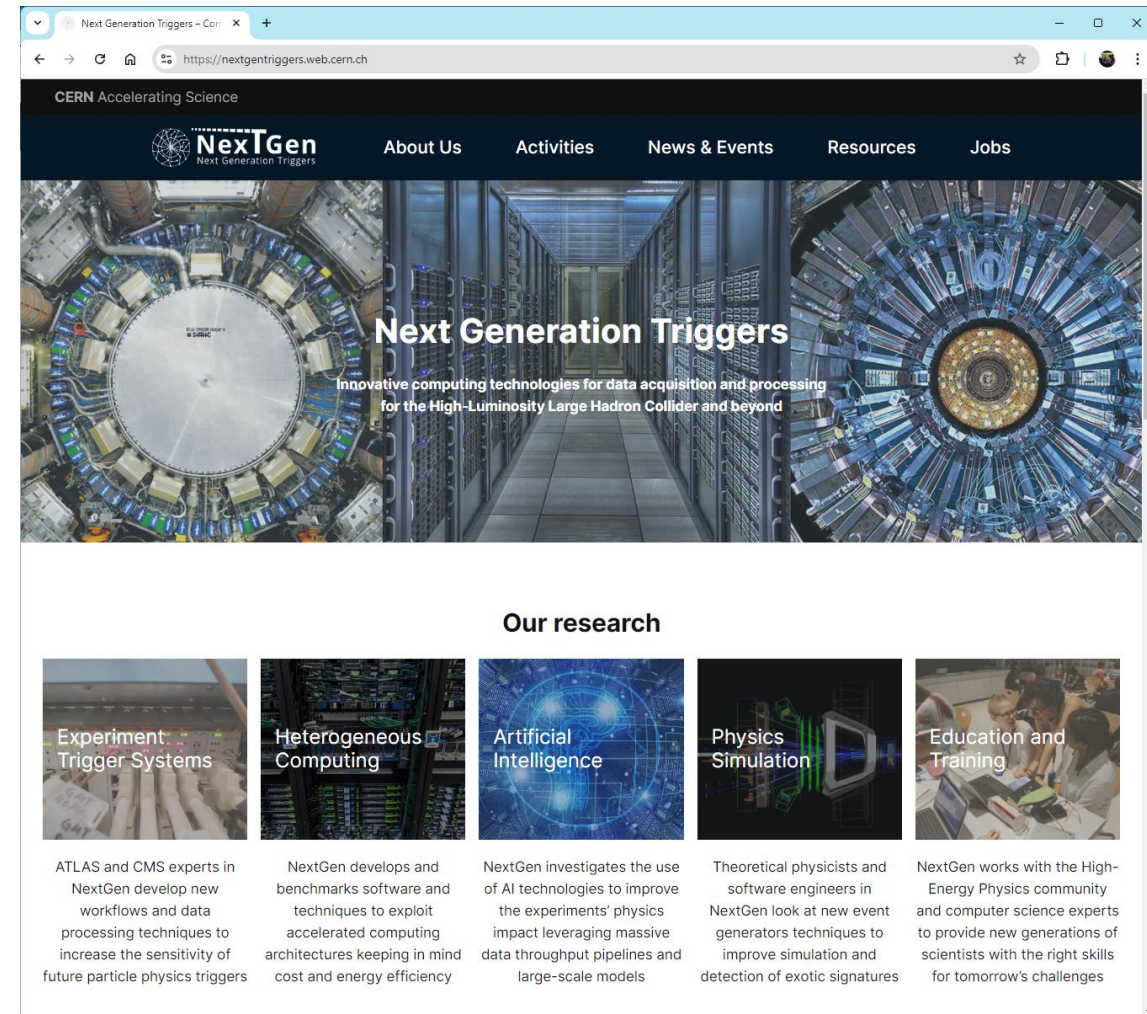
To the general population, including press and VIP visitors

Reminders

- Every person working on the project is a potential ambassador of the goals and results of the project
- Supervisors: ensure NextGen members are informed of the achievements and plans of the project

WP 4.1 Practically

- Already partially presented
 - Axel Lasa Lamarca with support from IT Communication and Outreach team (Antonella del Rosso)
- Advertising open positions
- Articles and social media presence
 - [CERN Web site](#), [CERN Courier](#), [X](#), [Facebook](#),
- [Indico category](#)
- Web site
 - <https://nextgentriggers.web.cern.ch/>
- Templates, logos

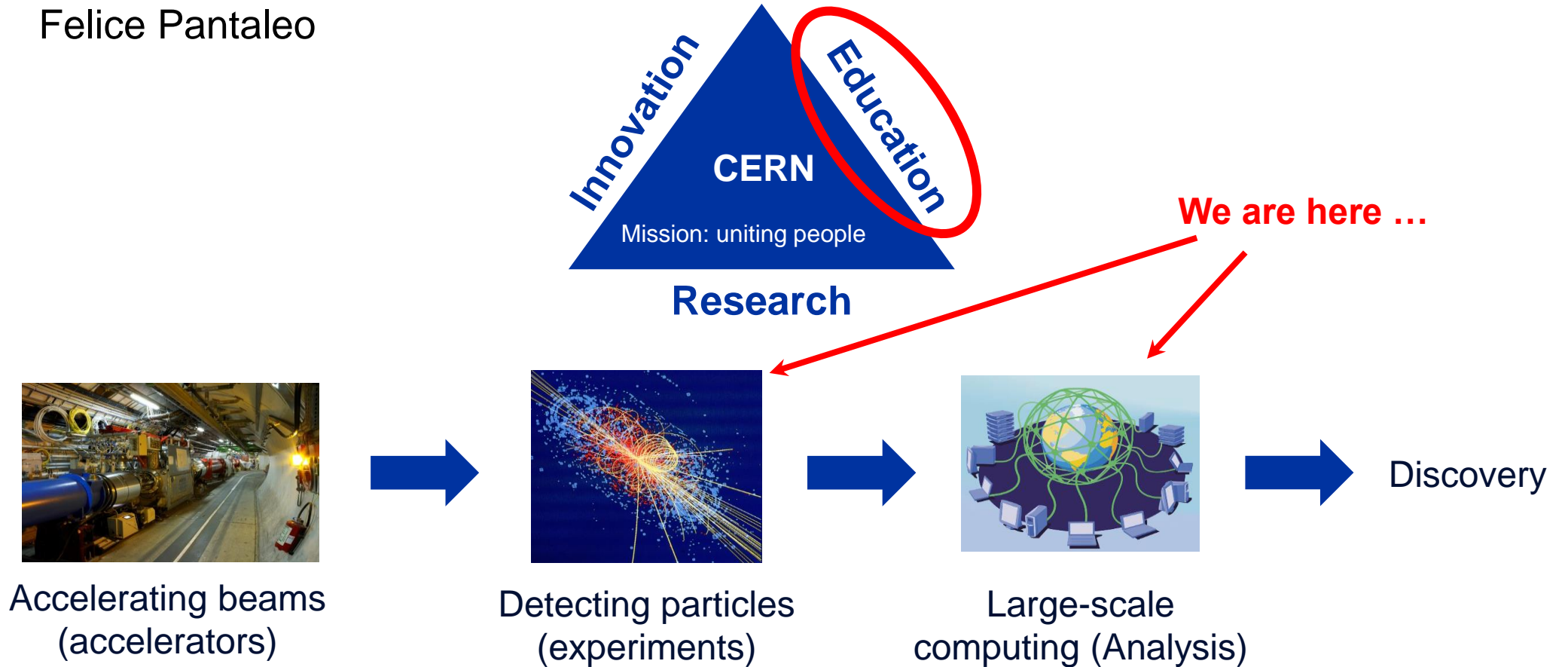


WP 4.1: Plans and events

- Continuous active exchange of experience and knowledge across a broad worldwide community of researchers in many different fields
 - Example [CHEP 2024](#)
- Exchange opportunities in the form of dedicated events, project workshops, visiting scientist grants, and specialistic seminars.
 - Save the Date: **25-27 November 2024**: First NextGen Technical Workshop, <https://indico.cern.ch/event/1421629/>

Part 2: Education Programmes (WP 4.2)

- WP 4.2 Leader:
 - Felice Pantaleo



4 definitions of Education (/ , ɛdʒ ʊ 'keɪ ʃən /)

- The process of receiving or giving systematic instruction, especially at a school or university (OED)
- The process of teaching or learning, especially in a school or college, or the knowledge that you get from this (Cambridge Dictionary)
- The act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life (dictionary.com)
- Education is the transmission of knowledge, skills, and character traits and manifests in various forms ... (Wikipedia)

Training vs Education?

Education aims to pass broad knowledge over extended periods whilst training aims to apply knowledge to pass specific abilities, in the form of skills and behaviours.

Education for NextGen ?

- Disambiguation:
 - a) Basic IT Education for members of the NGT project
 - b) Delivering education on subjects needed to achieve real-time high-throughput data processing

Conferences & Workshops
CERN Schools, Other Schools

HR/LD group
Learning & Development

NextGen project

To NextGen staff

To the external world

- Who delivers NextGen specific education ?

NextGen staff

Why education is important in NextGen ?

- Working in NextGen requires advanced knowledge that is rarely taught in University
- Expertise domains are on the forefront of technology
- Knowledge is not (yet) in books or university courses, but in conference papers, proceedings, code or sometimes only in expert's head
- This knowledge has a high value in domains outside of NextGen

Vision

- Ensure that every member of the project receives basic education (when needed) and advanced education on cutting edge technology topics to guarantee their success in their participation to NextGen.
- Involve industry and university for delivering “recognized” training and support the organization of events outside CERN
- Expect that all experienced members of the NextGen project will contribute to share their expertise.
- Recognize the value of teaching members and the educational skills of persons able to transfer knowledge
 - Academic lectures, technology seminars, lightning talks, educational articles, documentation, tutorials, demonstrators, teaching, hackatons...

Practically, several possibilities:

- CERN Learning hub
 - Technical training, Communication courses, Leadership and management courses
- Academic training
- Conferences, Workshops, Seminars
 - NextGen Seminars
- Partnerships with industry (CERN openlab) and contracts with vendors
- HEP and CERN Schools

So far ...

- Sponsored EUCAIFCon - <https://indico.nikhef.nl/event/4875/>
- Participation in the following schools
 - International School of Triggers and Data Acquisition (ISOTDAQ) – June
 - CERN School of Computing – September
 - SmartheP Edge Machine Learning School
 - School on "Artificial intelligence and modern physics" – Sep-Oct
 - Efficient Scientific School of INFN - October
 - Thematic School of Computing on Machine Learning – October
- Advanced training courses on various technologies (at CERN or in industry)
- Upcoming – **Registration still possible**
 - **CERN School of Computing in IT Services** – November
Meet all IT experts and learn how to use effectively IT services: Software development and hosting (Swan, Git, Kubernetes, VM, software maintenance strategies, reproducible data analysis and reusable containers for scientific workflows, using the Data Center infrastructure for Machine Learning applications)



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