

LESSONS LEARNED FROM DEVELOPING EC HORIZON 2020 PROJECTS

Practice & Experience for EC Horizon/Digital Europe Projects

MASTERCLASS ON TECHNOLOGY TRANSFER FOR PHD STUDENTS, AUDNA, MAY 25th, REYKJAVIK

Prof. Dr. – Ing. Morris Riedel et al.

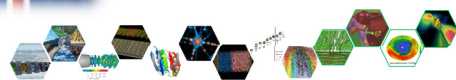
Full Professor, Computer Science Department, University of Iceland
EuroHPC Joint Undertaking Governing Board Member for Iceland



EuroHPC
Joint Undertaking



**IHPC National Competence Center
for HPC & AI in Iceland**



**FACULTY OF INDUSTRIAL ENGINEERING, MECHANICAL
ENGINEERING AND COMPUTER SCIENCE**

AGENDA & Selected Talk Goals

24 + 25 MAY 2022

**MASTERCLASS
ON TECHNOLOGY TRANSFER
FOR PhD STUDENTS.**

2 days of mentoring with scientific entrepreneurs, mentors and R&D professionals to learn scientific innovation, Business Model Canvas, intellectual property rights, financing, public speaking and other valuable insights.

Participation fee: 10.000,- isk, incl. lunch.
Further information and registration at: info@ttoiceland.is
Address: Gróska, Bjargargata 1, 102 - Reykjavík, Iceland. Meeting room: Fenjamýri, ground floor.

**AUDNA
TAKNIÓRG
TTO ICELAND**

PROGRAMME

MAY 24th

09:00 Introductions & programme.
09:30 "From basic research to business" - Helga Dögg Flosadóttir PhD, Atmonia.
10:00 "Technology Transfer - What, Why and How?" - Einar Mäntylä, CEO, Audna TTO.
10:30 Coffee break.
10:45 "IP: The lifeblood of your innovation" - Jón Gunnarsson, Hugverkastofan.
11:15 "IP is the corner stone in the value creation of companies"
- Guðmundur Þór Reynaldsson, Controlant.
11:45 Q&A + discussions.
12:00 Lunch.
12:45 "Business Model Canvas 101" - Ásta Söllilja Guðmundsdóttir, Audna TTO.
13:30 Working in teams with mentors.
17:00 End of Day 1.

MAY 25th

09:00 Welcome & programme.
09:15 "Icelandic Grants for R&D projects" - Þórunn Jónsdóttir, Þórunn Consulting.
10:00 "Lessons learned from developing EC Horizon 2020 Projects offering Practice & Experience for EC Horizon/Digital Europe Projects" - Prof. Morris Riedl, HÍ.
10:45 Coffee break.
11:00 "Telling your story to the world" - Eiríkur Sigurðsson, biologist and PR consultant.
12:00 Lunch.
12:45 Working in teams with mentors.
14:45 Team presentations & feedback sessions.
16:30 Drinks and celebration.

PARTNERS



■ Motivation

- Impact Example of EC Projects for Communities & PhDs
- Why should PhD Students actually care?

■ General Understanding of EC Projects

- Funding & Tenders Portal
- Structure of EC Projects with Part A & B

■ Selected Lessons Learned

- Challenge: 18 Years of EC Project Submission Experience in ~45 Minutes
- Practical Insights with Demonstrations (not just Powerpoint)



Why? – EC Project Example & Community Impact



- Simulation & Data Lab Communities
 - Experts w.r.t. **HPC in domain-specific topics**
- Based on extensive community experience
 - Juelich Supercomputing Centre in Germany works with the model for ~18 years



Simulation and Data Lab Computational Chemistry

General Information

Advancement of theory and methodology for atomic scale simulations, with broad ranging applications for chemistry and physical chemistry, reaction rate theory, adsorption spectroscopy, and magnetism, to name a few.

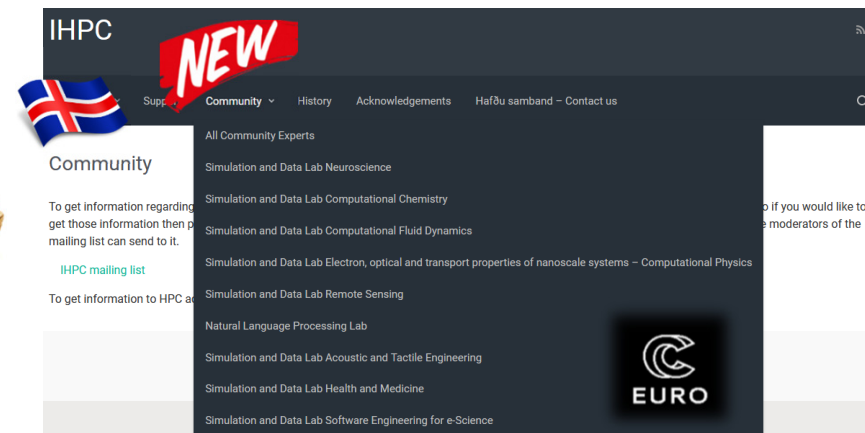
Prof. Hannes Jonsson

Dr. Elvar Örn Jónsson

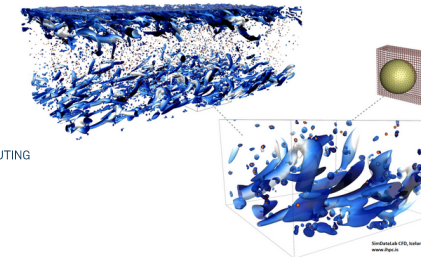
Development of explicit polarizable classical solvent models and methodology for hybrid simulations coupling classical and quantum mechanics for the simulation of solvated molecules and the solid / liquid interface.

Dr. Pavel Bessarab

<http://ihpc.is> Website



Simulation and Data Lab Computational Fluid Dynamics



Dr. Pedro Costa



Dr. Ásdís Helgadóttir



Ph.D. Student S. Reza Hassanian. M



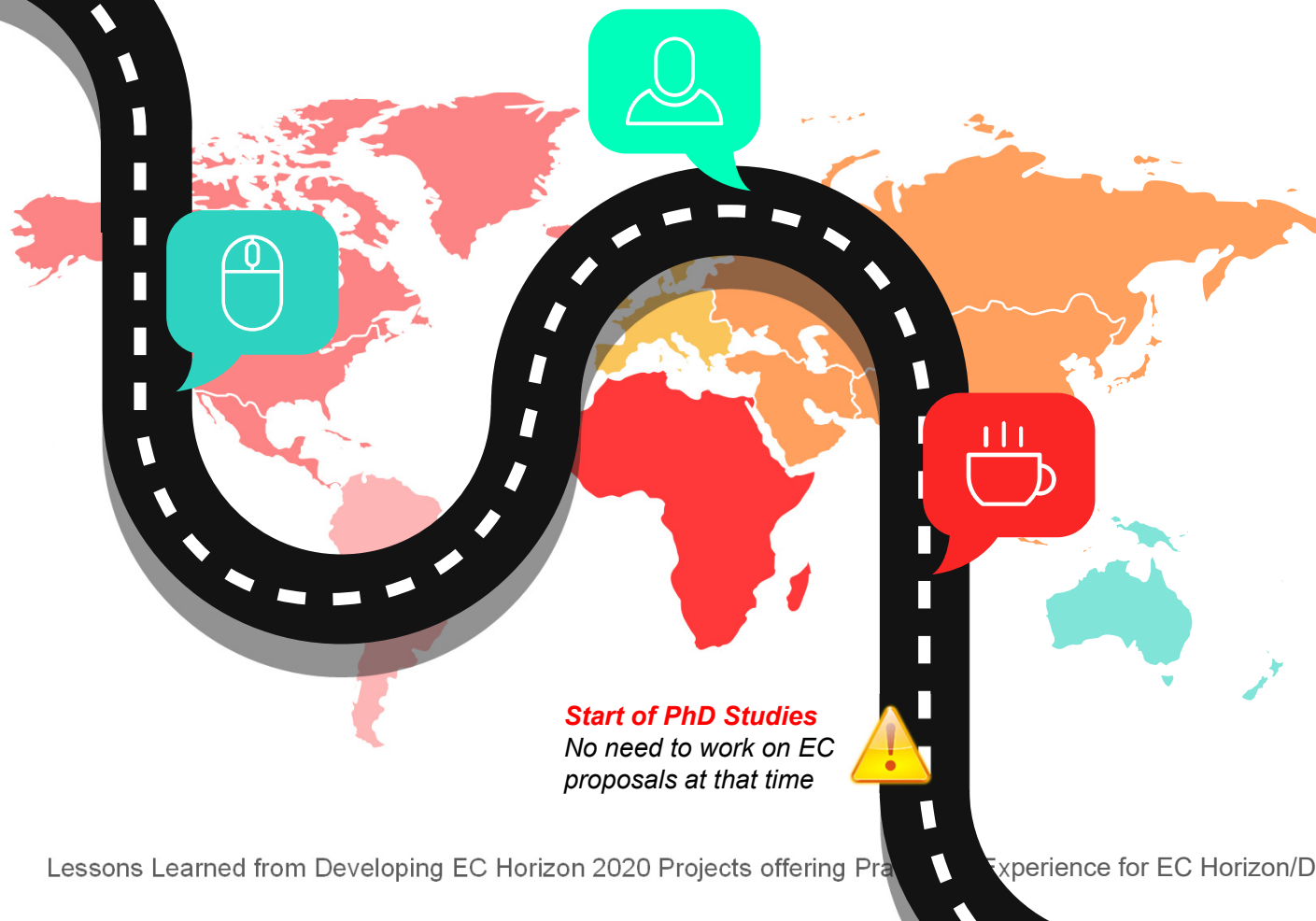
Prologue

The Simulation and Data Lab computational fluid dynamics (SimDataLab CFD) is leading parallel computing in Computational fluid dynamics in Iceland at the University of Iceland. The SimDataLab is Iceland's representative in the international projects in CFD and parallel computing. SimDataLab CFD aims to develop parallel code applications in CFD and support users who have already developed parallel application codes. SimDataLab CFD participates in the European project network in parallel computing and has an infrastructure and access to powerful parallel systems in-memory optimization, processing system architecture, high scalability, and have performance optimization computer nodes.

Motivation – Why EC Projects are useful for PhDs?



PhD Studies end some time: Entering PostDoc time can be tricky
Funding needs to be there



Start of PhD Studies
No need to work on EC proposals at that time

Understanding the bigger picture

- Enables smoother transition into PostDoc time
- Understanding better what an academic life entails towards professorship
- Steer interesting topics to work on

Towards more Publications

- Drive more publications through project results (e.g., 'burden of deliverables' good)
- Cover costs for increasing Journal Open Access fees (e.g., gold standard, etc.)

More Travel & Increased Networking

- Cover costs for travel to expensive conference, exhibitions, forums (with or without papers)
- Being exposed to different places, people, and life/work situations: incredible potential you can get in combining those skills in EC projects
- Increased contacts world-wide good for career

Example – How a EC Project Proposal Looks Like



Submitted Proposals might be changed after acceptance
E.g., copyright problems with project names, partners change, etc. – contract negotiation & amendments

SHORT WALKTHROUGH

<https://www.coe-raise.eu>

Technical annex

Research and Innovation actions
INFRAEDI-05-2020 - Centres of Excellence in exascale computing



Understanding PART A & B
Part A is in the EU Portal (later) and Part B are the real ideas



RESEARCH ON AI- AND SIMULATION-BASED ENGINEERING AT EXASCALE (RAISE)

List of participants

Participant No. *	Participant organization name	Short name	Country
1 (Coordinator)	Forschungszentrum Jülich GmbH	FZJ	DE
2	University of Iceland	UOI	IS
3	The Cyprus Institute	CYI	CY
4	RWTH Aachen University	RWTH	DE
5	Barcelona Supercomputing Center	BSC	ES
6	Conseil Européen pour la Recherche Nucléaire	CERN	CH
7	Centre Européen de Recherche et de Formation Avancée en Calcul Scientifique	CERFACS	FR
8	Bull SAS	BULL	FR
9	Rigas Tehniska Universitate	RTU	LV
10	Flanders Make VZW	FM	BE
11	Safran HE	SAFRAN	FR

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Background – What means Digital/Horizon Europe?

SHORT DEMO

← → ↻ 🏠 <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/digital> 110% ☆

Digital Europe Programme

Digital Europe Programme is the first EU programme that aims to accelerate the recovery and drive the digital transformation of Europe.

Worth €7.6 billion (in current prices), the Programme is a part of the next long-term EU budget, (the Multiannual Financial Framework), and it covers 2021 to 2027. It will provide funding for projects in five crucial areas: supercomputing, artificial intelligence, cybersecurity, advanced digital skills, and ensuring the wide use of digital technologies across the economy and society.

The Programme is fine-tuned to fill the gap between the research of digital technologies and their deployment, and to bring the results of research to the market - for the benefit of Europe's citizens and businesses, and in particular SMEs. Investments under the Digital Europe programme supports the Union's twin objectives of a green transition and digital transformation and strengthens the Union's resilience and strategic autonomy.

- Find calls for proposals
- Projects & Results
- Priorities
- What's new?

Find calls for proposals in Digital Europe Programme


[View \(47\)](#)

⚠️ Calls for Tenders are not available when you have selected a programme. [See all calls for tenders published by EC](#)



Enables to search for very specific calls for proposals
Your project ideas need to fit those proposals, so might not fit 100% PhD study, but still useful & future oriented (e.g., PostDoc time?)

← → ↻ 🏠 <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon> 110% ☆


Horizon Europe

Horizon Europe is the ambitious EU research & innovation framework programme for 2021-2027 with a budget of €95.5 billion.

Its overarching goals are:

- to strengthen the EU's scientific and technological bases and the European Research Area (ERA);
- to boost Europe's innovation capacity, competitiveness and jobs;
- to deliver on citizen's priorities and sustain our socio-economic model and values.

with a particular focus on creating impact or the European Green Deal, the digital and sustainability transition and recovery from the coronavirus-crisis.

For more information, please see the [Horizon Europe web site](#).

- Find calls for proposals
- Projects & Results
- Programme structure
- Missions areas
- Simplified funding
- What's new?

Find calls for proposals in Horizon Europe

[View \(1094\)](#)

⚠️ Calls for Tenders are not available when you have selected a programme. [See all calls for tenders published by EC](#)

Projects & Results

See the work done in past and ongoing projects. View the statistics on proposals, success rates, funded projects and participants.

[Check dashboard](#)

Question – Is it hard to start? How do I start?

Motivation to engage:
Skillset growths &
many EU template parts &
'ways of doing' stay the same



Final Submit – Hard Deadlines:
EU proposals could also be tuned
– so last minute EU proposal
submissions are normal – no
matter how early you started



- ✓ Extend consortium with skilled partners
- ✓ Assign work in a collaborative manner
- ✓ Iteratively improve proposal & telcos

- ✓ Download template of specific Call
- ✓ Bring template into Google Docs

- ✓ Identify specific Digital Europe/Horizon Europe call of interest & check line by line
- ✓ Gather Unique Selling Propositions

- ✓ Create EU portal profile
- ✓ Identify/Register your PIC number of your organization

Template structure ~constant
Only smaller number of changes over
the last 18 years, but more clarity

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Selected Impressions – EU Portal Funding & Tender



SHORT
DEMO

Grant Management Services will be experiencing issues on Wednesday 25.05.2022 between 07:30 and 08:10 CET.

Proposal submission service may not be available between 27/05/2022 08:00:00 and 27/05/2022 09:00:00, while system maintenance is being performed. We apologize for any inconvenience this may cause.

HPC

☒ Match whole words only

☒ GRANTS ☒ TENDERS

Submission status

Forthcoming Open for submission (2) Closed (8)

Programming period

2021 - 2027 (10)

Digital Europe Programme (DIGITAL)

Funding and tenders (10)

Need help?



Sort by:

Submission status

Networking and coordination of national HPC Competence Centres and Centres of Excellence

DIGITAL-EURO HPC JU-2022-NCC-01-02

Call for proposal Grant

Programme	Digital Europe Programme (DIGITAL)	Status	Open for submission
Type of action	DIGITAL JU Coordination and Support Actions	Deadline model	single-stage
Opening date	20 April 2022	Deadline date	28 June 2022 17:00:00 Brussels time

National Competence Centres for High Performance Computing

DIGITAL-EURO HPC JU-2022-NCC-01-01

Call for proposal Grant

Programme	Digital Europe Programme (DIGITAL)	Status	Open for submission
Type of action	DIGITAL JU Simple Grants	Deadline model	single-stage
Opening date	20 April 2022	Deadline date	28 June 2022 17:00:00 Brussels time

Selected Impressions – EU Portal – My Proposals

SHORT
DEMO

Manage my area

My Person Profile

My Organisation(s)

Grants

My Proposal(s)

My Project(s)

My Formal Notification(s)

Best practices to submit your proposal: check this [FAQ](#) to find out some best practices to prepare the forms for your proposal and submit it.

My Proposal(s)

Results: 11

Search..

PROGRAMME	CALL	FUNDING SCHEME	PROPOSAL ID	ACRONYM	STATUS	REMAINING TIME	CLOSURE DATE (Brussels time)	ACTIONS
HORIZON	HORIZON-CL4-2022-DATA-01	HORIZON-RIA	101093208	CICERO	Submitted	0	05/04/2022 17:00:00	Actions
HORIZON	HORIZON-CL2-2022-HERITAGE-01	HORIZON-RIA	SEP-210835773	HEGELabs	Draft	15	20/04/2022 17:00:00	Actions
HORIZON	HORIZON-MISS-2021-CANCER-02	HORIZON-RIA	SEP-210846851	IMPLICATED	Draft	21	26/04/2022 17:00:00	Actions
DIGITAL	DIGITAL-2021-EDIH-01	DIGITAL-SIMPLE	101083762	EDIH-IS	Final	Closed	22/02/2022 17:00:00	Actions
H2020	H2020-JTI-EuroHPC-2020-03	EuroHPC-CSA	101051604	EduHPC	Final	Closed	01/07/2021 17:00:00	Actions
H2020	H2020-FETPROACT-2020-2	RIA	101017954	NARES	Final	Closed	02/07/2020 17:00:00	Actions
H2020	H2020-DT-2020-1	IA	101017084	AI-HOSPITAL	Final	Closed	17/06/2020 17:00:00	Actions
H2020	H2020-ICT-2020-1	RIA	957215	AI4CPPS	Final	Closed	16/01/2020 17:00:00	Actions
H2020	H2020-JTI-IMI2-2019-18-two-stage	IMI2-RIA	945480	iCanStandards	Final	Closed	26/09/2019 17:00:00	Actions
H2020	H2020-SC1-DTH-2019	RIA	875474	Almpact	Final	Closed	24/04/2019 17:00:00	Actions

Selected Impressions – EU Portal – My Projects

SHORT
DEMO

Welcome Morris RIEDEL (nrimorri)



Manage my area

My Person Profile

My Organisation(s)

Grants

My Proposal(s)

My Project(s)

My Formal Notification(s)

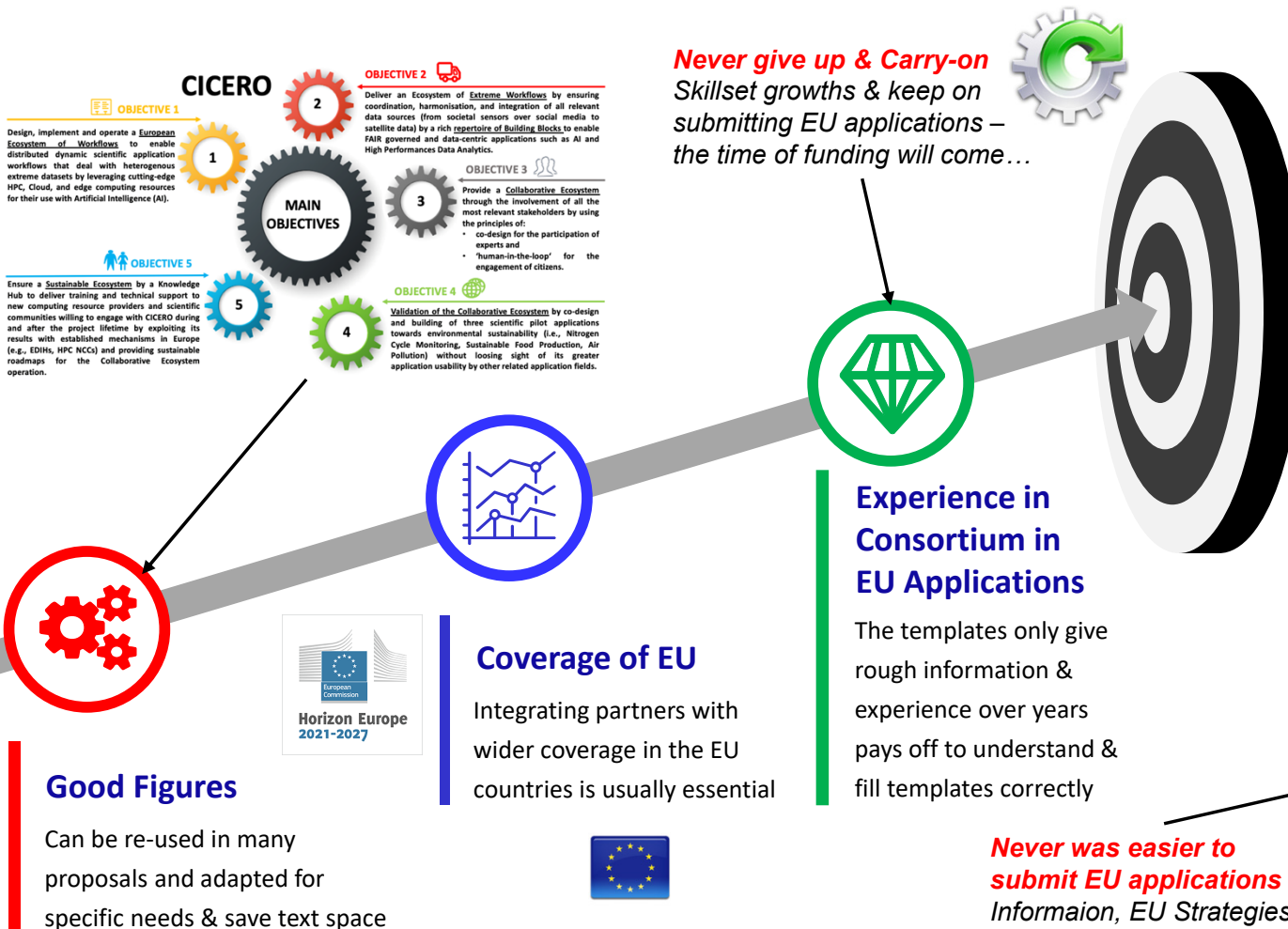
My Project(s)

Results: 4

ACRONYM	TOPIC ID	PROGRAMME	PROJECT	PHASE	Actions
DEEP-EST	FETHPC-01-2016	H2020	754304	Archive	Actions
EOSC-Nordic	INFRAEOSC-05-2018-2019	H2020	857652	Active	Actions
EUROCC	EuroHPC-04-2019	H2020	951732	Active	Actions
RAISE	INFRAEDI-05-2020	H2020	951733	Active	Actions

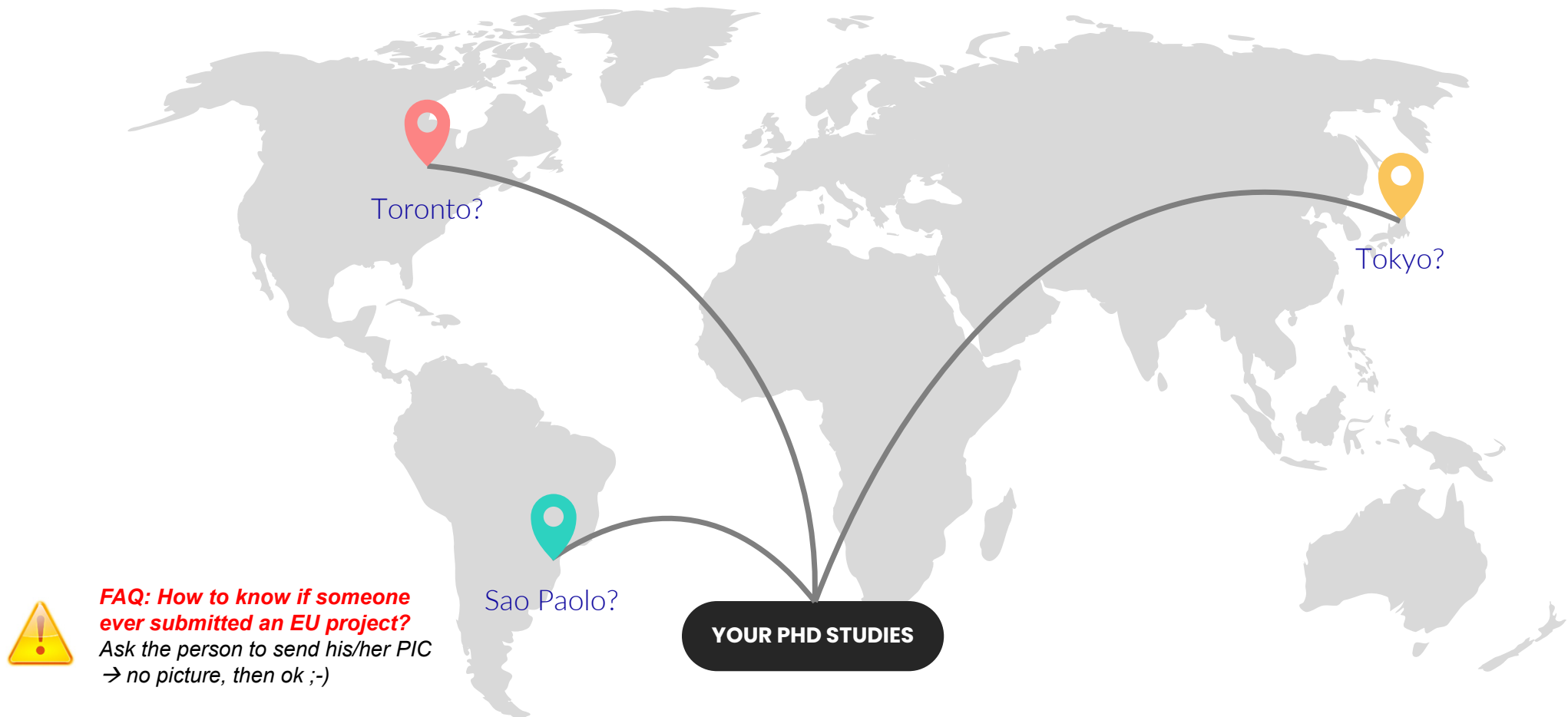
110

Selected Lessons Learned (from HPC/AI Experience)



- ✓ Check PIC number of participants (e.g., some send you their picture)
- ✓ Weekly Phone calls essential to progress → schedule until submission
- ✓ Check template constraints: font sizes, margins (i.e., google different vs. word)
- ✓ Check funding ratios: 50%, 125%, etc.
- ✓ Extend the consortium not with friends of friends of friends → complementarity
- ✓ Press on partners to deliver with daily reminders → budget according inputs
- ✓ Template offers many chances for fine tuning & save space (e.g., tables)
- ✓ **Good news: Digital/Horizon Europe**
 - ✓ Often less pages (e.g., 45 vs. 70)
 - ✓ EU Portal stability improved over FP5, FP6, FP7, Horizon 2020
 - ✓ More have know-how now

GREETINGS FROM IEEE MIPRO & Q&A – Session





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