

BEST PRACTICES IN NEW PROFESSIONALS EDUCATION FOR NUCLEAR NEW BUILD IN DUKOVANY II.

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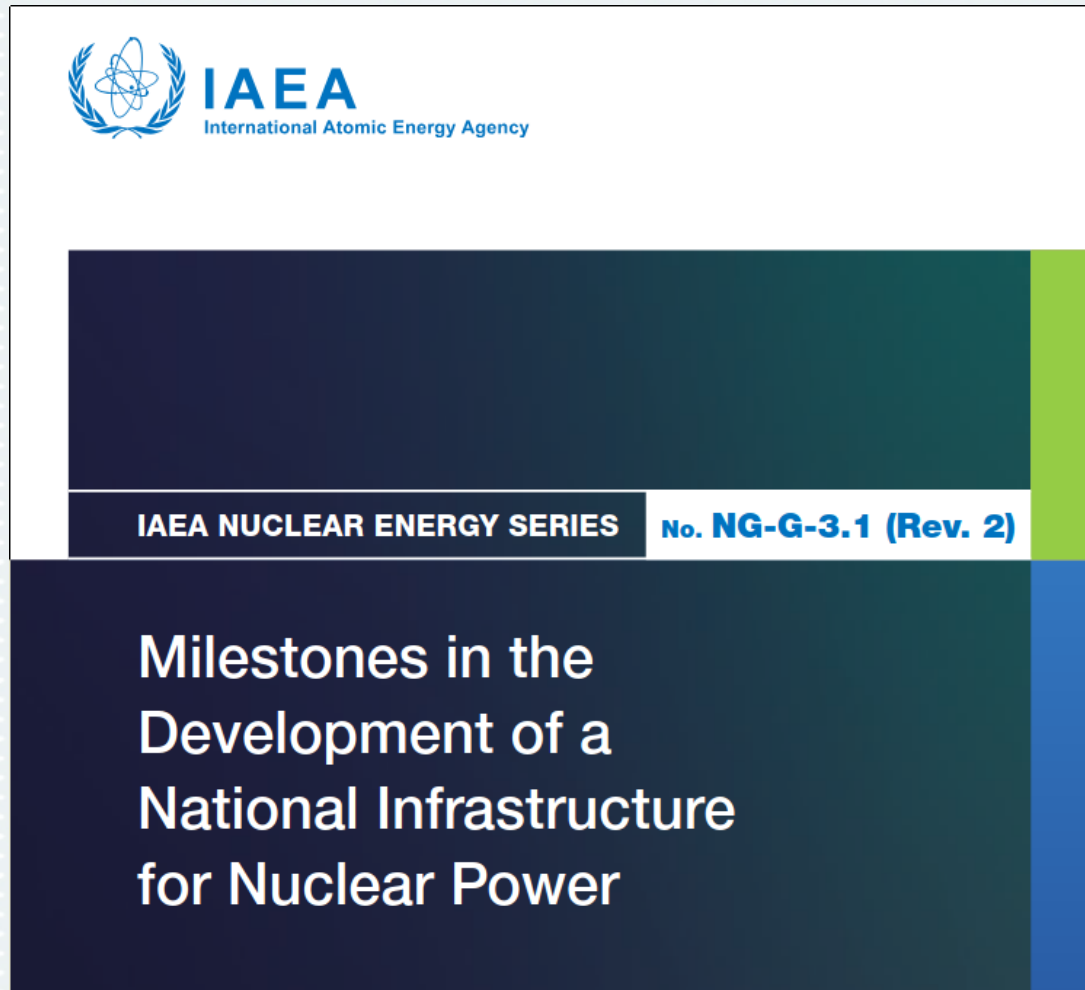
BEST PRACTICE IN THE INTERNATIONAL ATOMIC ENERGY AGENCY

„Best Practice“ is an example of a standing policy, strategy, procedure, process, tool, technique or method that supports enhanced compliance with relevant performance indicators in the effective and efficient delivery of the objectives.

BEST PRACTICE IN COMMON SENSE

Try to do what someone else has already successfully done.

BEST PRACTICE IN NUCLEAR EDUCATION – IAEA




BEST PRACTICE IN NUCLEAR EDUCATION – IAEA


Regional Training Course on the Introduction of Nuclear Sciences in Secondary Schools


November 4, 2024 – November 20, 2024

Location: [Argonne National Laboratory](#), Lemont, IL, USA and [Prairie View A&M University](#), Prairie View, TX, USA

Information

 Agenda

 Event Materials (protected)

 Photos (protected)

Tools

 Upload

Resources

Purpose

The purpose of the event is to train secondary school educators (teachers) to effectively convey nuclear science and technology (NST) knowledge by strengthening their technical knowledge and empowering them with engaging educational approaches.

Project Background

Nuclear science and technology (NST) is an important factor in the industrial and economic growth of developing countries. Beyond the nuclear power industry, NST plays a critical role in healthcare, agriculture, and manufacturing, which are essential for continued, sustainable improvements in standard of living. The rapid development experienced by the Africa region further reinforces the need for NST knowledge and a qualified workforce. Therefore, it is imperative to enhance the



Joint ICTP-IAEA Nuclear Knowledge Management School

This year ICTP and IAEA are celebrating the 20th Anniversary of the Joint ICTP-IAEA Nuclear Knowledge Management School

BEST PRACTICE IN NUCLEAR EDUCATION – IAEA



The screenshot shows the IAEA website header with the logo and navigation menu. Below the header is a banner for the International Nuclear Management Academy (INMA) featuring a photograph of several people in white lab coats and hard hats (yellow and green) working together in a laboratory or industrial setting. The text on the banner reads: "International Nuclear Management Academy (INMA)". Below the banner is a paragraph of text describing the INMA scheme.

IAEA
International Atomic Energy Agency

TOPICS ▾ SERVICES ▾ RESOURCES ▾ NEWS & EVENTS ▾ ABOUT US ▾ Search

INMA
International Nuclear Management Academy

International Nuclear Management Academy (INMA)

The IAEA facilitated International Nuclear Management Academy (INMA) scheme supports universities to establish and deliver master's degree programmes in nuclear technology management (NTM) for the nuclear sector, including nuclear power programmes, nuclear applications, and radiological technologies. The programmes are a combination of advanced aspects of management and leadership coupled with nuclear technologies, providing high level education and support for the nuclear industry leaders of the future.

Members

- National Research Nuclear University MEPhI, Moscow, Russia
- The University of Tokyo, Japan
- Texas A&M University, United States of America
- North-West University, South Africa
- University of the Witwatersrand, South Africa
- Budapest University of Technology and Economics, Hungary
- National Polytechnic University, Armenia
- University of West Bohemia, Czech Republic
- KEPCO International Nuclear Graduate School, South Korea
- University of Idaho, United States of America

BEST PRACTICE IN NUCLEAR EDUCATION – NEA, WNU

Nuclear Science and Education

The goal of the NEA in this area is to help member countries identify, collate, develop and disseminate the basic scientific and technical knowledge required to ensure the safe, reliable and economic operation of current and next-generation technologies. The NEA nuclear science programme is developed and executed by the Nuclear Science Committee (NSC), comprising high-level scientific experts from all NEA member countries with the objectives of helping advance the existing scientific knowledge needed to enhance the performance and safety of current nuclear systems; contributing to building a solid scientific and technical basis for the development of future generation nuclear systems; and supporting the preservation of essential knowledge in the field of nuclear science.



PROGRAMMES

FOR ORGANIZATIONS

LEADERSHIP ROADMAP

Our learning model

Empowering Leaders: Our Transformative Approach to Leadership Learning.



Summer Institute

An immersive, five-week nuclear leadership and professional development programme.



LEAD Programme

Leadership enhancement opportunity for professionals in the nuclear industry.



Future programmes

Understanding and addressing the evolving leadership needs within the nuclear industry.



BEST PRACTICE IN NUCLEAR EDUCATION – EUROPEAN UNION



ENEN2plus Project

TOURR Project

SaTE Project

ENEN DATABASE

APPLY ENEN

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ENEN

European Nuclear Education Network

We bring our contribution in preserving and developing the European Capacity in the Nuclear Fields

LEARN MORE

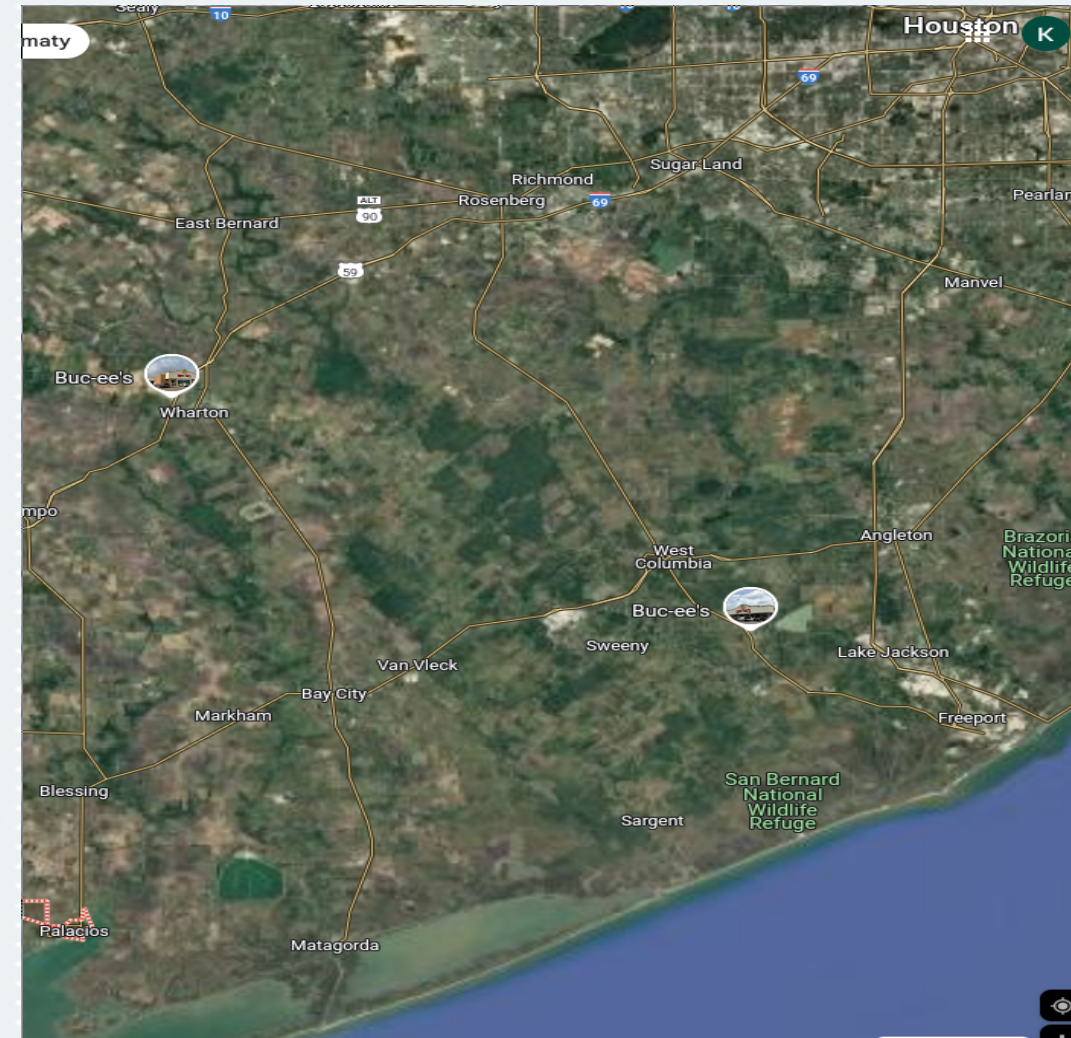
BEST PRACTICE IN NUCLEAR EDUCATION – PARTICULAR EXPERIENCE: TEXAS

NPI

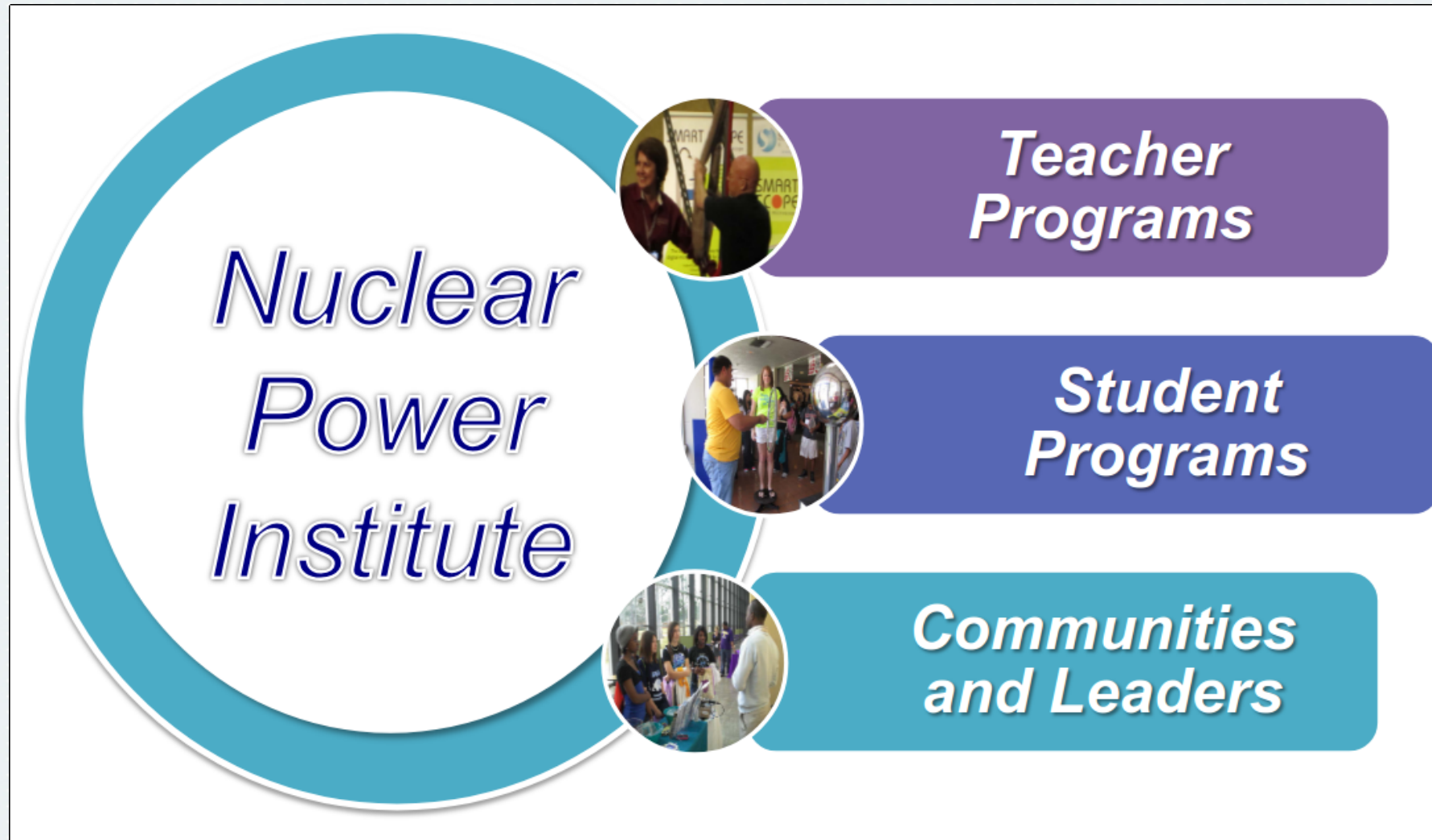
NUCLEAR POWER INSTITUTE

Nuclear Power Institute

- NPI is a *partnership* of
 - *industry,*
 - *universities,*
 - *two-year technical and community colleges,*
 - *high/secondary schools and junior highs,*
 - *students and teachers,*
 - *communities,*
 - *stakeholders,*
 - *elected leaders,*
 - *state, federal, and international agencies*



BEST PRACTICE IN NUCLEAR EDUCATION – PARTICULAR EXPERIENCE: TEXAS



BEST PRACTICE IN NUCLEAR EDUCATION – PARTICULAR EXPERIENCE: TEXAS

BRT

- *Boys Resourcing Technology*
- Extension of WIT
- Focus on elementary and junior high boys
- Engage in academic activities
- Stay focused on STEM path



POWER SET

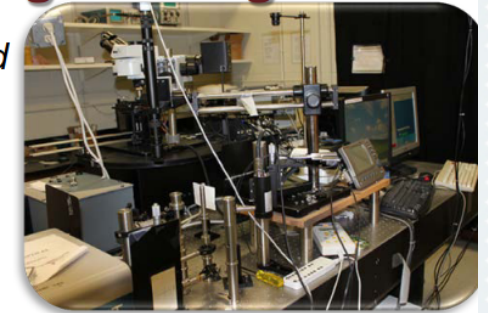
Powerful Opportunities for Women Eager and Ready for Science Engineering and Technology

High school/secondary school girls selected to apply for membership
Educational tools and support to pursue STEM studies and careers



Teachers *Enrichment Experiences in Engineering*

Develop curriculum and experiments for the classroom



Experiences with the latest in engineering research



Practical experience at the nuclear power plant.





BEST PRACTICE IN NUCLEAR EDUCATION – PARTICULAR EXPERIENCE: KOREA

- Korea – 40 years of continuous construction
- In 2012 first foreign NPP unit construction started
- In 2012 KEPCO International Nuclear Graduate School established

Technology Sharing

Goal 1



Fostering Practical Engineering

for Students from Developing Countries

- Full scholarship program for students from developing countries
- Internship program for international students
- Accommodations and teaching - aid materials for all students

Goal 2



Short-term Non-degree Courses

for those from Countries Wishing to Introduce Nuclear Power Plants

- IAEA interregional training course
- Short-term training courses for the universities of Middle East and Asian countries
- Short training programs for the officials of the first NPP deploying countries

Goal 3



Customized Short Training Courses

for NPP Industries

- KHNP Short training courses for NPP engineering
- KEPCO-KPS short training courses for I&C engineers

Goal 4



Joint Training with KOICA

as an Official Development Assistance Program

Let's learn from someone else using „best practice“ approach!



(Czech-Korean) Nuclear Cooperation Center (institute – if you want) established between KINGS and Brno University of Technology in September 2024.

OUR MISSION, GOALS, AND VISION

- In the school → for students (BUT and KINGS mutual activities)
- In the region → for the community (for high-schools and general public in the region of Dukovany NPP and Kori NPP)
- In the country → for the academia (for Czech and for Korean universities)
- In general → education for industry

- Cooperation with associations and alliances like CENEN, CNS (Czech Nuclear Society), KNS, KNA
- Cooperation with Polish-Korean NCC in Warsaw
- Cooperation with other V4 academic partners

EXCHANGE STUDENTS PROGRAM

- Students from Brno University of Technology to KINGS
 - 2018-2022 two per semester (18 in total)
 - 2022-2024 four per semester (15 in total)
 - 2024-... six/ten per semester (application have been submitted – **12 students**)
- Students from KINGS to Brno University of Technology
 - none up to now
 - The first two students in 2025
- Korean industry internships from Sep.2025 (part of diploma)
 - 2x FNC Technologies approved; Deawoo E&C, Hyundai E&C under negotiation
- Dual (double) degree (from Sep.2025) between BUT-KINGS



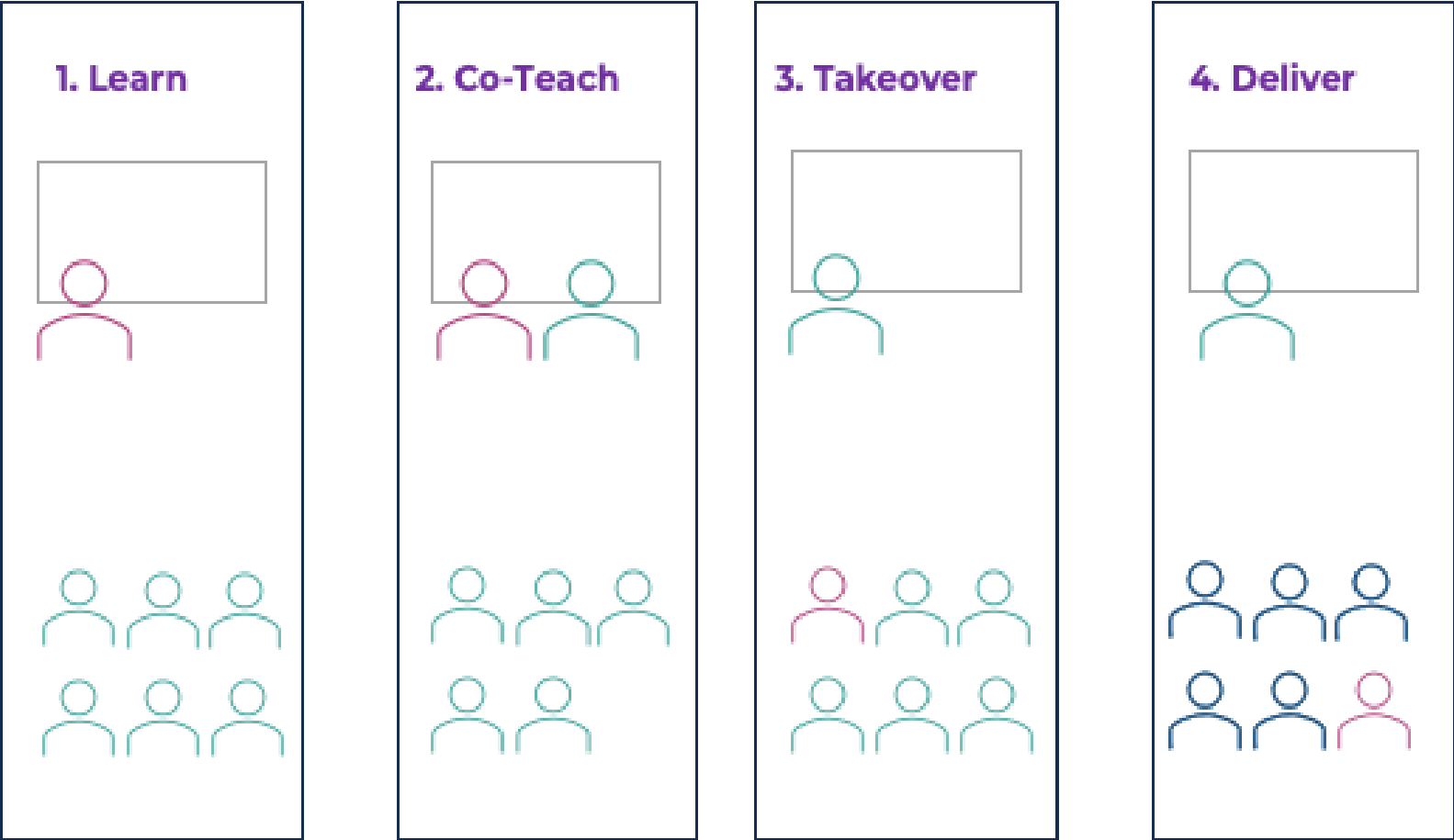


MUTUAL PhD SUPERVISION

YOUNG JUNIOR PROFESSORS SUPPORT

- Students are one pillar, teachers the second one
- To become university teacher, the PhD study is the first step. It has to be challenging and motivating (and paid...)
- Mutual PhD has been introduced – supervisor at BUT, co-supervisor at KINGS; research area is of mutual interest
- Opportunities for young professionals (lecturers, research associates, assistant professors, junior researchers) to grow
- NCC will support short term stays (from 2 to 8 weeks)

TRAIN THE TRAINER MODEL



SUMMER AND/OR WINTER SCHOOLS

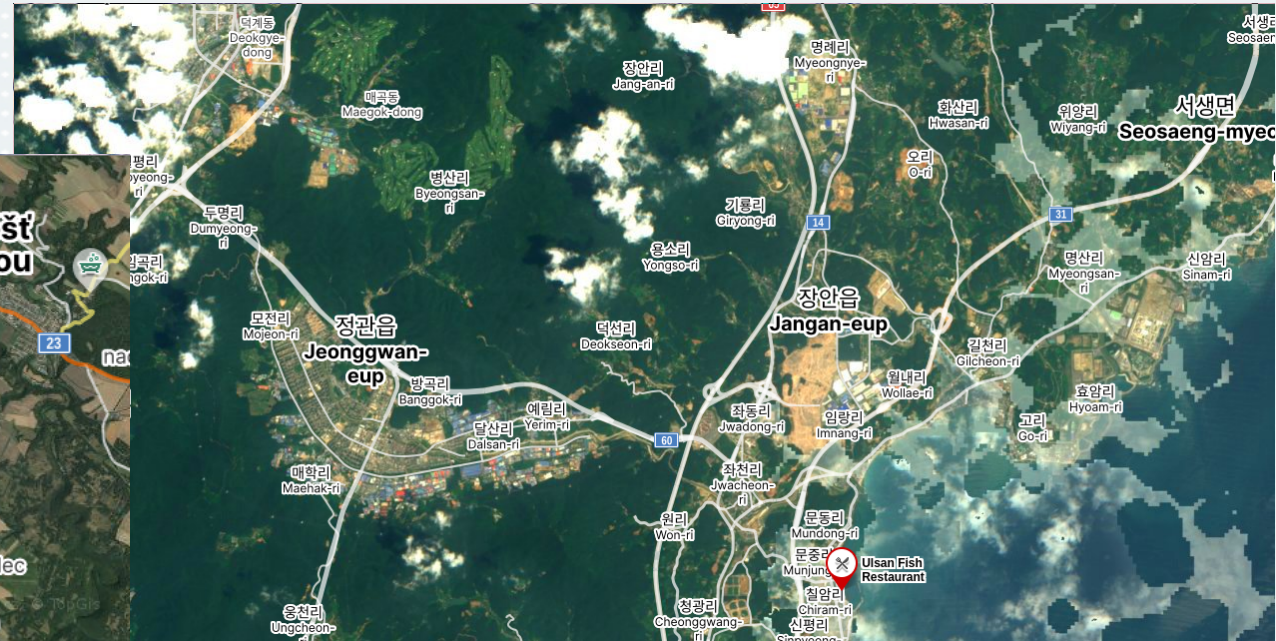
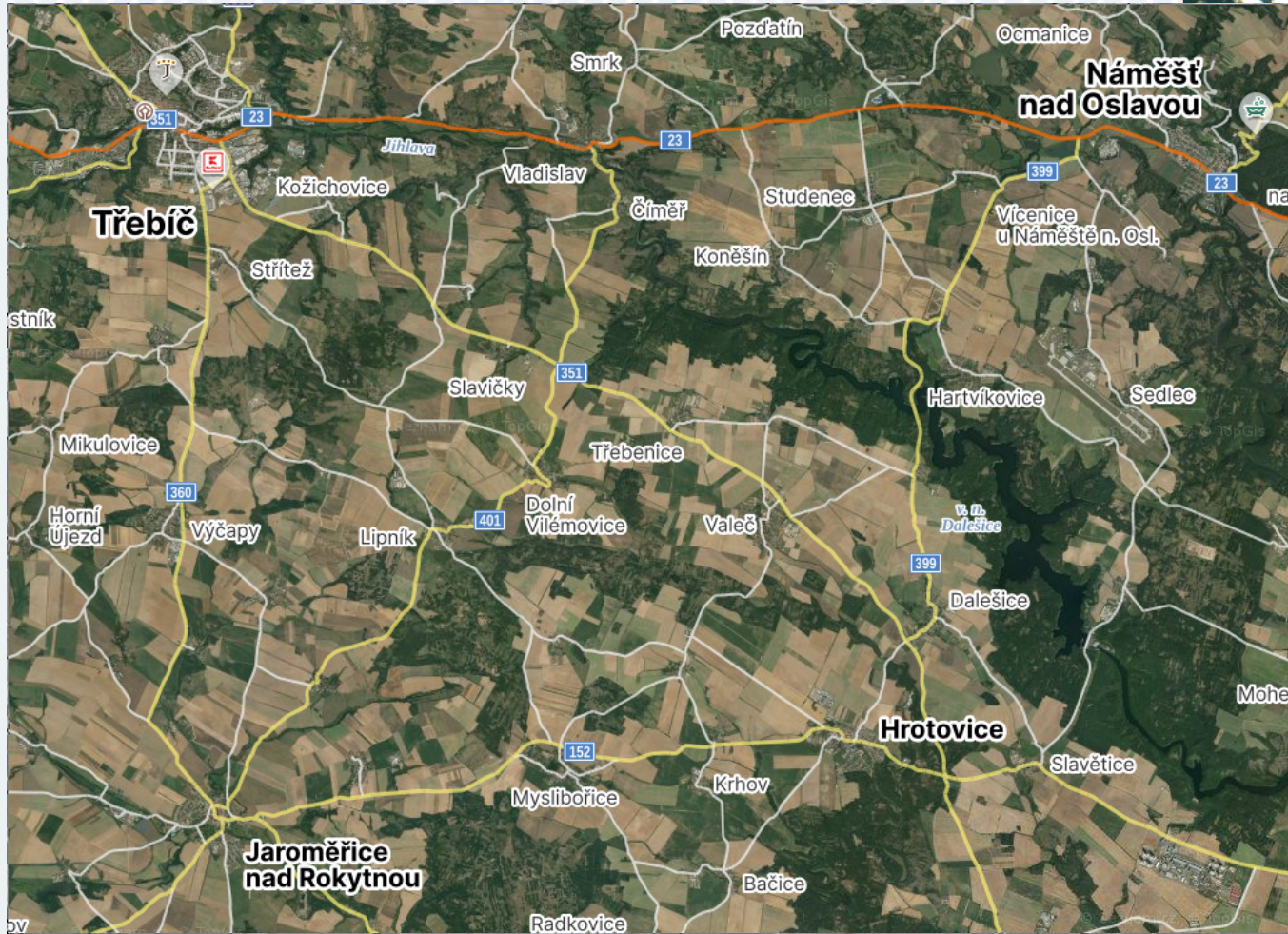
- Not all students can go for 1 semester internship or DualDeg
- Every student focused on nuclear should have possibility to go to Korea even for just 2 weeks
- Summer Schools and Winter Schools will be organized (in Korea mostly, but also in Czechia, and other V4 countries)
- Winter school program was proposed with Kyung Hee Univ.
 - One week KINGS intensive education
 - One week in KHU – training AGN reactor laboratory courseworks
 - One week tour around Korean industry (Doosan, Deawoo, KNF, KAERI, FNC, KHNP E&C, KHNP CRI, KHNP, KORAD, Samsung, Jeju University...)



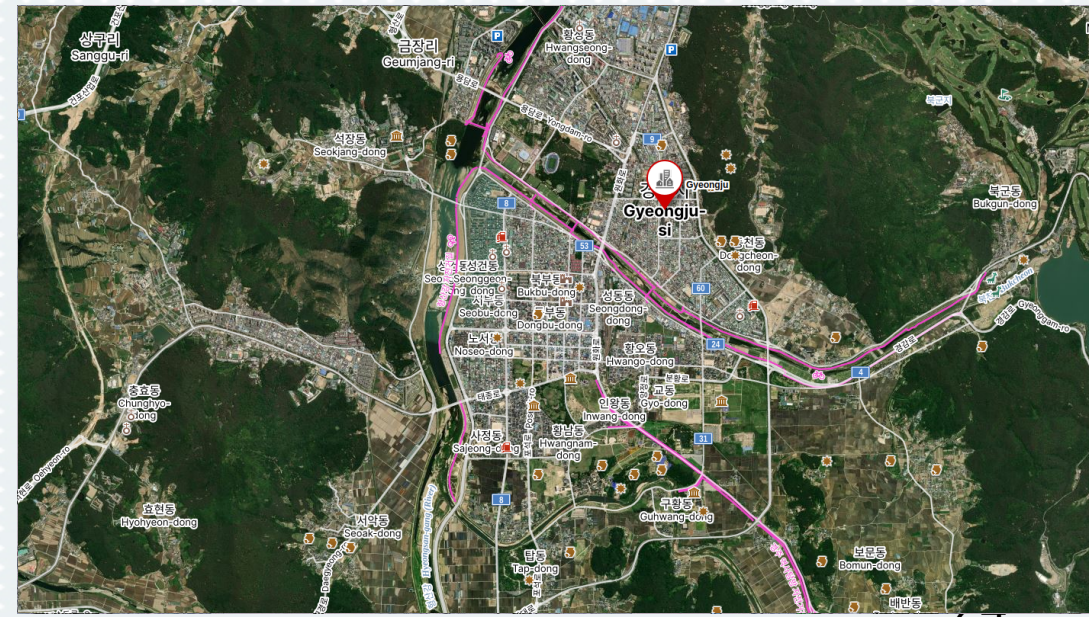
POSTGRADUATE EDUCATION, CERTIFICATES

- Focused on supplier companies mostly
- Nuclear study programme at BUT is taught in „blocks“ (4 weeks = two courses, Mo+Tu; We+Th; Fri seminars)
- Company employee will attend only block he/she needs
- KINGS and other Korean professors are going to visit BUT within NCC activities for short very special courses
 - Probabilistic Risk Assessment of NPP, February/March 2025
 - Economy and Management of Nuclear Power Plants, March/April 2025

Kori region



Gyeongju region



Gyeongju is a partner city of Třebíč from September 19, 2024



REGIONAL APPROACH – HIGH SCHOOLS, ELEMENTARY SCHOOLS

- Within NCC we will establish and support cooperation within Trebic high schools and **high schools** from Kori NPP region
- The first activity will be **a week for high school teachers** – Trebic teachers will spend week in Korea and Kori region teachers will spend week in Trebic
- Activities focused on children/students are being discussed with teachers and high-school directors
- We are preparing special program focused on girls – high school students who are interested in STEM

THANK YOU
FOR YOUR
ATTENTION !



TODAY

30 YEARS