



Comprehensive Engineering Projects

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PRESENTATION OUTLINE

ENVINET Projects finished in 2014

ENVINET Ongoing Projects

ENVINET Upcoming Projects



Projects finished in 2014

Off-site chemical and radiochemical analyses (EC JRC Ispra)

- **Project:** ND&WM programme support and operations services and related supplies
Lot 1: Off site destructive and non-destructive radiological analyses and off site chemical analyses
- **Country:** Italy
- **Client:** European Commission, Joint Research Centre Ispra
- **Site:** Off-site services at supplier's premises
- **Price:** € 1,4 M
- **Realization:** 12/2009 – 09/2014

KEY POINTS

- Long-term contract, realization in work packages
- Follow-up project to existing contract executed by ENVINET since 2009
- Consortium cooperation with company WERT



Portal Gates for KACST

- **Project:** Supply of 4 Portal Gates
- **Country:** Saudi Arabia
- **Client:** King Abdulaziz Centre for Scientific and Technology site
- **Site:** Off-site services at supplier's premises
- **Price:** several small contracts
- **Realization:** First part delivered 08/2014



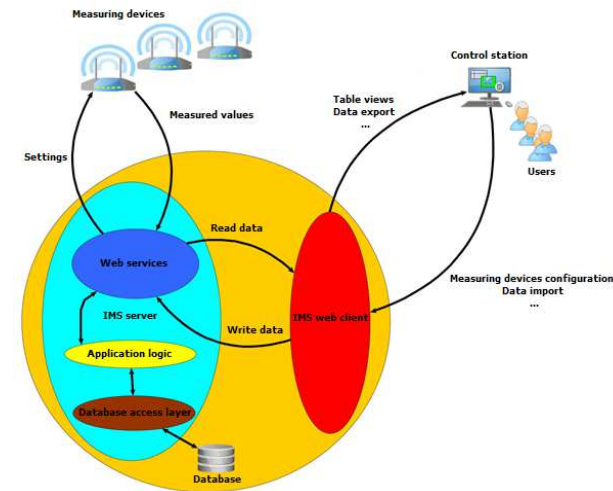
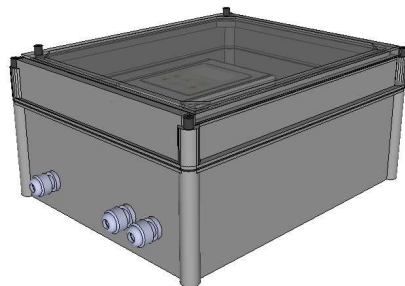
KEY POINTS

- Ongoing second part in 2015
- Pilot project for KACST, another business opportunities in negotiation



Military Institute Poland - Gamma DR Monitoring Network

- **Project:** Gamma Dose Rate Monitoring Network
- **Country:** Poland
- **Client:** Military Institute Poland
- **Price:** € 0,1 M
- **Realization:** Completion in October 201
- **Scope:**
 - Design, manufacturing and installation of 8 GM based dose rate stations
 - (NuEM EGM-03 probes with 2 GM tubes, switchboards with datalogger, display, backup power, FV panels, GSM data transfer) and central SW (application and database server) and HW (cluster servers)

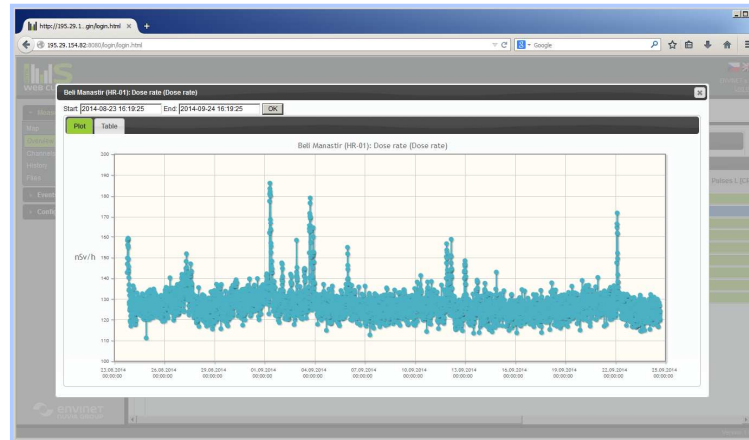


Croatia - Gamma DR Monitoring Network

- **Project:** Gamma Dose Rate Monitoring Network
- **Client:** Central Finance and Contracting Agency, Zagreb
- **Country:** Croatia
- **Price:** € 0,18 M
- **Scope:** Design, manufacturing and installation of 8 GM based dose rate stations NuEM EGM-03 probes with 2 GM tubes, switchboards with datalogger, display, backup power, FV panels, GSM data transfer) and central SW (application and database server) and HW (cluster servers)

KEY POINTS

- Completed (August 2014)
- Good continuity to ENVINET experience with design and supporting of similar system in the Czech Republic and Latvia.
- On-going provisional acceptance



Dukovany NPP Information Centre Reconstruction

- **Project:** Dukovany NPP Information Centre Reconstruction
- **Client:** CEZ Company
- **Site:** Dukovany NPP
- **Price:** € 1,13 M
- **Scope:** Comprehensive reconstruction of premises and equipment
 - projection and presentation equipment
 - static and movable models and layouts
 - HVAC and electric installation

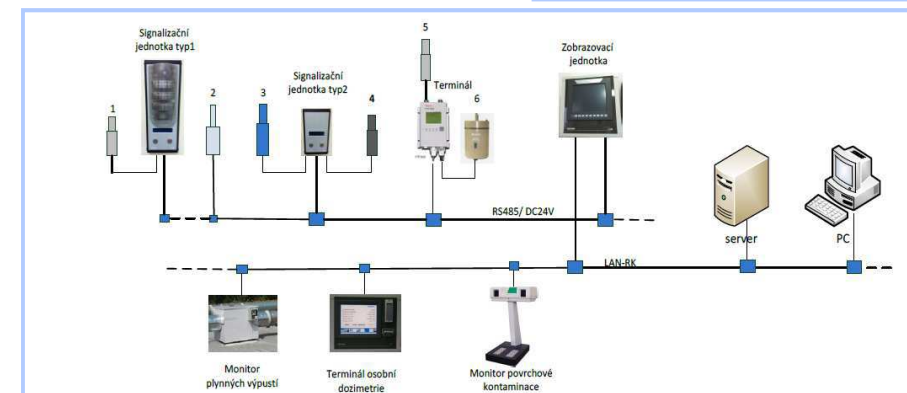


KEY POINTS

- Completion 12/2014
- ENVINET also provides maintenance of Dukovany and Temelin NPPs information centres.
- 470.000 visitors visited Dukovany NPP Information Centre in 1991-2011
- Good reference for Slovakian NPPs Infocentres

UJV Rez – restricted area boundaries monitoring

- **Project:** Restricted area monitoring
- **Client:** Research Centre Rez
- **Site:** Rez near Prague, Czech Republic
- **Facility:** Build of Research Centre
- **Budget:** € 0,4 M
- **Realization:** 06/2013 – 03/2014
- **Scope:** Radiation monitoring system (hand-foot monitors, monitors of surface contamination, turnstiles, cameras, new doors, card readers, UPS, etc).
 - Sophisticated SW for data collection and online synchronization with the others inputs.
 - Engineering services, technical support.

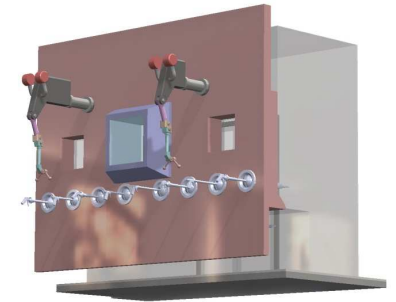
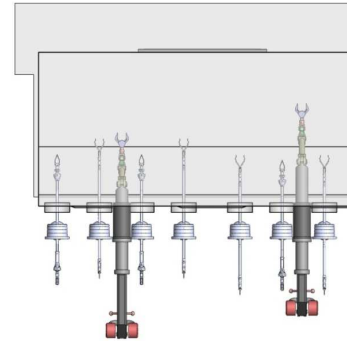


KEY POINTS

- Improvement of radiation protection level in the building with high risk of radioactive contamination.
- Negotiation for implementation of the same projects at another building, laboratory and PET centres.

UJV Rez – Semi-Hot Cells Refurbishment

- **Project:** Reconstruction of 2 semi-hot cells, machinery supply
- **Client:** UJV Rez, a. s.
- **Site:** Rez near Prague
- **Facility:** Radiochemistry building 250
- **Budget:** € 1,95 M
- **Scope:**
 - Steel shielding construction.
 - Internal stainless steel box.
 - Pb glass (6 pc) (Saint – Gobain SOVIS supplier).
 - Master/Slave manipulators (4 pc) – Wällischmiller supplier.
 - 4 machines for cutting, measuring, breaking, melting.



KEY POINTS

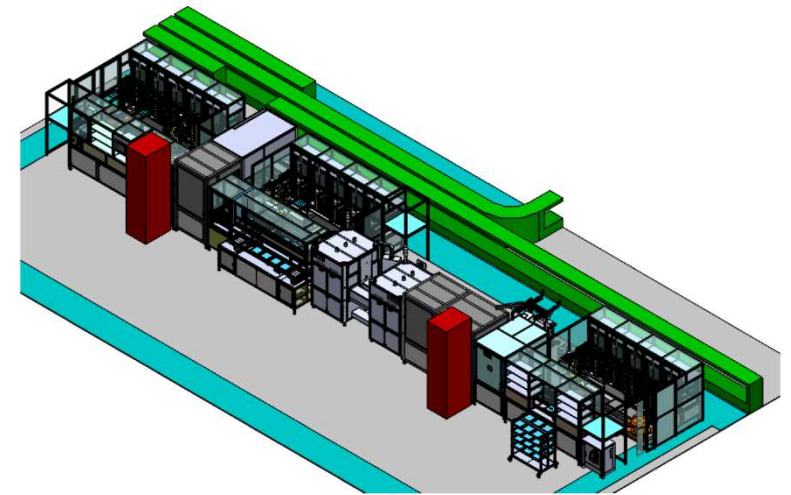
- Completion 06/2014
- Reference for upcoming relevant projects in Czech.
- Civil work supplied by SMP CZ (VINCI Construction subsidiary).

Assembling of LED Light Sources II

- **Project:** Assembly Line for LED Light Sources II
- **Client:** Automotive Lighting
- **Budget:** € 1,75 M
- **Site:** Automotive Lighting Jihlava Czech Republic
- **Scope:** Fully automatic line for assembling of different LED light sources for headlamps.
 - Inserting of trays with input components and removing of trays with final products.
 - Heatsinks cleaning by plasma and inserting into working pallet.
 - Dosage of glue on prepared heat sinks.
 - LED gluing on heatsink and camera control.
 - PCB gluing on heatsink and LED.
 - Laser soldering of LED and PCB together.
 - Electrical testing of light sources.
 - Laser marking of finished light sources.

KEY POINTS

- Completion 10/2014
- Cooperation of industrial robot with vision system for LED positioning.



Laboratories for Institute of Chemical Technology Prague

- **Project:** Design and manufacture of laboratory equipment
- **Client:** Institute of Chemical Technology
- **Site:** Prague
- **Realization:** 10/2013 – 1/2014
- **Budget:** € 0,7M
- **Scope:** Comprehensive equipment of reconstructed laboratories
 - 2 buildings – 24 labs.
 - Furniture, fume hoods of various types, incubators, instruments...



KEY POINTS


- Co-operation with civil construction company
- Extension of references in educational sector.

University of Veterinary and Pharmaceutical Sciences Brno

- **Project:** Supply and installation of laboratory equipment
- **Client:** VFU
- **Site:** Brno
- **Budget:** € 0,2 M
- **Completion:** 08/2014
- **Scope:** Comprehensive equipment of new built pavilion.
 - Furniture, fume hoods of various types, instruments...



Tomas Bata University in Zlín – Centre of Polymer Systems

- **Project:** Supply and installation of laboratory equipment
- **Client:** Tomas Bata University in Zlín  Tomas Bata University in Zlín
- **Site:** Zlín
- **Budget:** € 0,8 M
- **Completion:** 12/2014
- **Scope:** Comprehensive equipment of new built pavilion.
 - Furniture, fume hoods of various types, instruments...
 - Installation of new smart fume hoods developed by ENVINET.



Successful R&D project – High volume air sampler

User programmable air flow up to 140 m³/hour

Local operating panel with user-friendly interface

Remote control and set-up via Ethernet/USB

Local data storage (internal Flash memory)

Interchangeable inserts for various filter materials

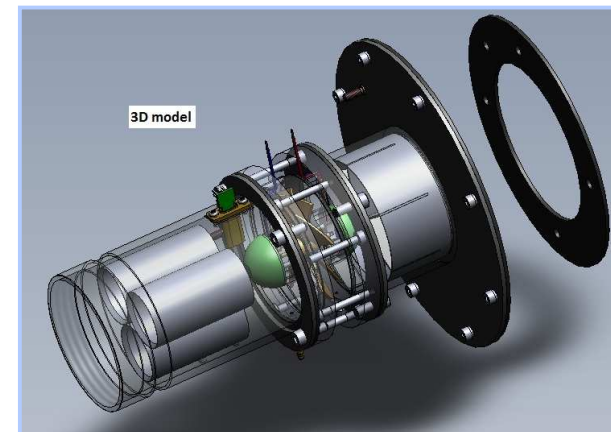
Auto-calibration

High precision automatic volume control, max. error 0.001m³

Temperature measurement/correction

Area of application > radioactive aerosols, emissions, air pollutions, viruses, dustiness etc.

Pilot operation at Dukovany NPP successful



Successful R&D project – Intelligent GM probe

Key part of our Environment monitoring systems

Several variants (number and type of GM tubes, communication options, etc.)

Compact weather-sealed ALU housing

Electronics integrated inside tube

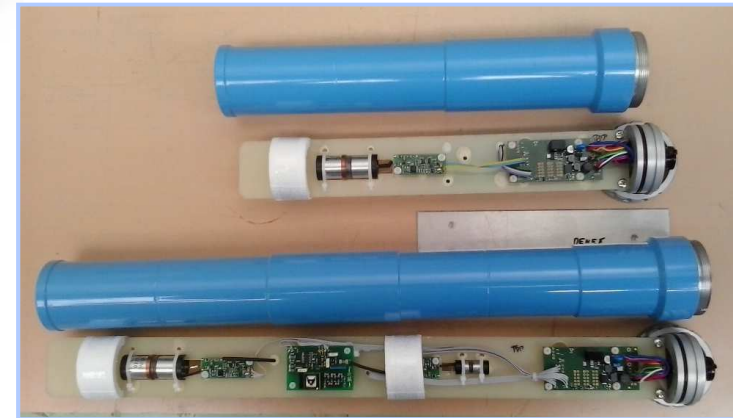
USB/MODBUS/ETHERNET data output

Range from 10nSv/hr to 10Sv/hr (different variants)

Direct LAN data output (PLC or PC not necessary)

Compatible with RAMON SW system

Tested, applied in projects.



Ongoing Projects

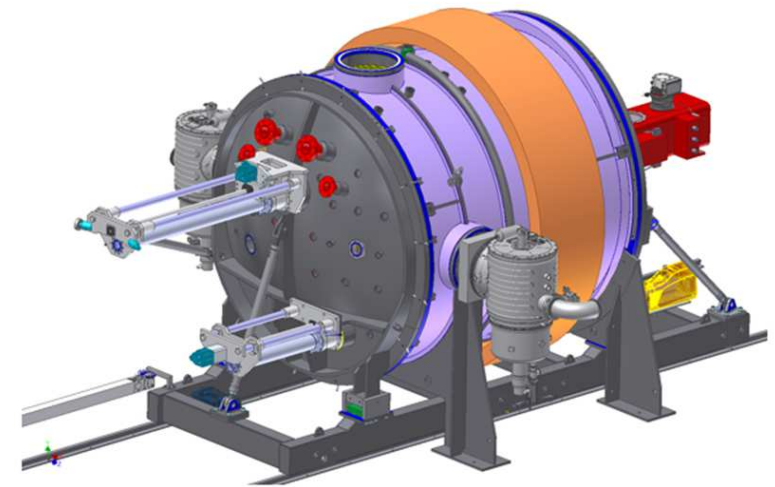
HELCza - Primary First Wall (PFW) testing facility



- **Project:** Primary First Wall (PFW) testing facility
- **Client:** CV Řež
- **Site:** Řež near Prague
- **Budget:** € 5,87 M
- **Scope:**
 - Design of the experimental facility HELCZA based on the conceptual design provided by the customer.
 - On-site completion of experimental facility HELCZA from equipment supplied by subcontractors (Electron beam gun; Vacuum chamber; Electromagnetic coils; Beryllium detection and decontamination system; Lead shielding; Diagnostic and control system etc.).
 - Calibration and start-up including qualification tests.

KEY POINTS

- In realization (07/2014 – 12/2015).
- So far one of the most challenging project of ENVINET
- On-going: Design and construction stage of the project



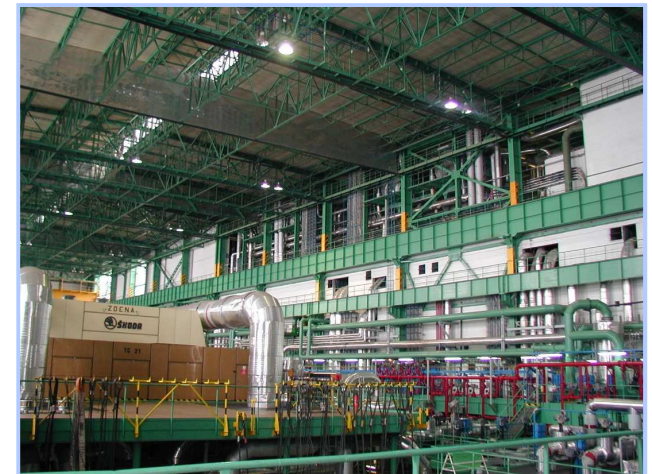
Reconstruction of sprinklers at hermetic zone of Dukovany NPP

- **Project:** Hermetic zone sprinkler system reconstruction
- **Client:** ČEZ – Dukovany NPP
- **Site:** Dukovany NPP
- **Estimate price:** € 1,7 M
- **Scope:** Design and supply of stable aerosol sprinkler system for all 4 units of Dukovany NPP (replacement of current system)



KEY POINTS

- Start in 09/2014
- ENVINET is sub-contractor of SMP (Czech construction company – VINCI group).
- Success of the whole project depends on the ENVINET's part.
- Very important from our position on site point of view.



Radioactive waste treatment services (Ukrainian NPPs)

- **Project:** „Improvement of radioactive waste characterization systems at Ukrainian operational nuclear power plants“ and „Procedures and methodology for clearance of materials from regulatory control“ (U4.01/10 lots B+E)
- **Country:** Ukraine
- **Client:** European Commission, on behalf of and for the account of the beneficiary country, Ukraine
- **Site:** Ukrainian NPPs
- **Budget:** € 1,5 M



KEY POINTS

- ENVINET is leader of Consortium – with WERT (Slovakia) and AKP (Ukraine).
- Scheduled date of project completion: April, 2016
- Kick-off meeting was held in Kiev on October the 2nd, 2014
- Chernobyl is going to be a pilot NPP for installation of FRM system.
- Good chance for our R&D activities extension.



Supply in frame of SUSEN Project (Sustainable Energy)

- **Project:** Master/Slave mechanical manipulators
- **Client:** Research Centre Rez (subsidiary of NRI Rez)
- **Site:** Rez
- **Facility:** A new building on site
- **Estimate budget:** €1,3 M
- **Scope:**
 - Supply of 28 pcs manipulators to new built hot cell hall.
 - Transport, unloading, revision.
 - Documentation, manuals, certificates.
 - Training of the operators.
 - Warranty and after-warranty maintenance and service



KEY POINTS

- 4 pieces submitted – first invoicing milestone.
- Supply in co-operation with strategic partnership – Wällischmiller (Germany).
- Cooperation with NRI Rez

Secondary ion mass spectrometer supply



- **Project:** Secondary ion mass spectrometer (SIMS) supply
- **Client:** CV Řež
- **Site:** Řež near Prague
- **Estimate budget:** € 1,8 M
- **Scope:**
 - Supply of a Secondary ion mass spectrometer.
 - Transport, unloading, revision.
 - Documentation, manuals, certificates.
 - Training of the operators.
 - Warranty and after-warranty maintenance and service.



KEY POINTS

- Estimation of delivery date – March 2015.
- First time delivery of this type of spectrometer in Czech.

Pb shielding glasses supply in frame of SUSEN Project



- **Project:** Radiation shielding glasses
- **Client:** CV Řež
- **Site:** Řež near Prague
- **Facility:** New building on site
- **Budget:** € 2,1 M
- **Scope:**
 - Supply of a 13 pcs radiation shielding glasses to new built hot cell hall.
 - Transport, unloading, revision.
 - Documentation, manuals, certificates.
 - Training of the operators.
 - Warranty and after-warranty maintenance and service.

KEY POINTS

- Estimation of delivery April/May 2015.

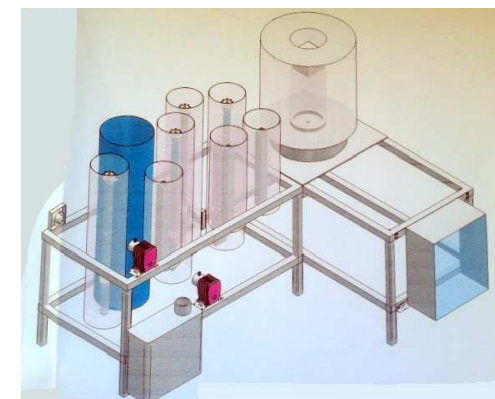


SUSEN Project (Sustainable Energy) – other projects



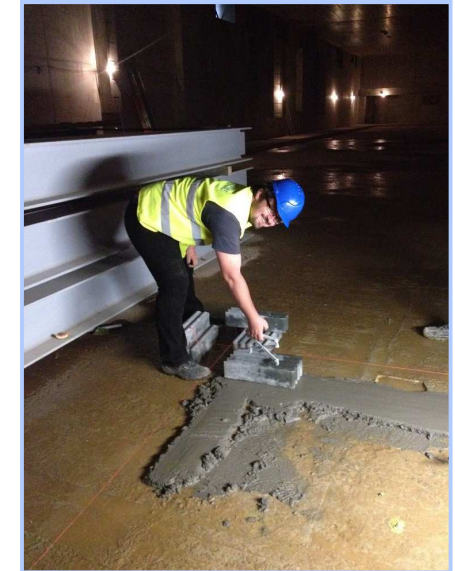
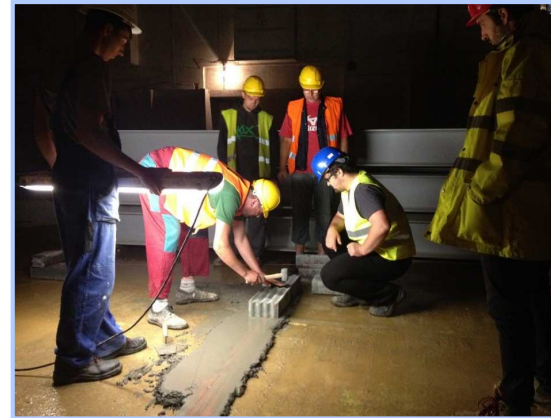
- **Project:** Supply of 4pcs anaerobic glove boxes
- **Client:** CV Řež
- **Site:** Řež near Prague
- **Budget:** € 0,23 M
- **Scope:**
 - Supply of 4 pcs anaerobic glove boxes.
 - Transport, Documentation, training of the operators, warranty service.
 - Content of O₂ – below 0,1 ppm.
 - First box delivered and invoiced.

- **Project:** High temperature electrolysis equipment
- **Client:** CV Řež
- **Site:** Řež near Prague
- **Budget:** € 0,17 M
- **Scope:**
 - Equipment for experimental production of hydrogen.
 - Project, documentation, supply, training, service.



Shielding blocks for ELI beamlines

- **Project:** Shielding blocks for Extreme Light Infrastructure (ELI)
- **Client:** Metrostav a.s.
- **Site:** Dolní Břežany
- **Facility:** New building
- **Estimate budget:** € 0,72 M
- **Scope:**
 - Shielding blocks ENVINET
 - Approx. 1000 m³ of shielding blocks.
 - Two kinds of blocks (2,35, 3,5 t/m³).
 - Supply for the biggest civil construction company in Czech.



KEY POINTS

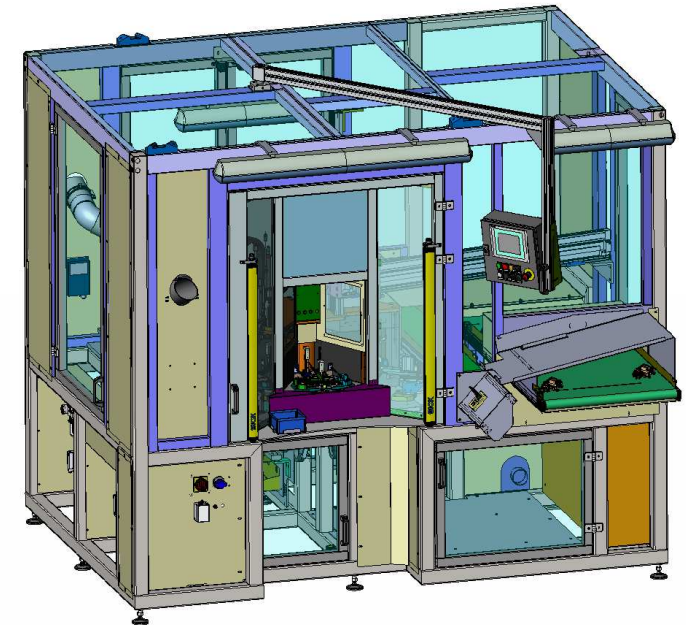
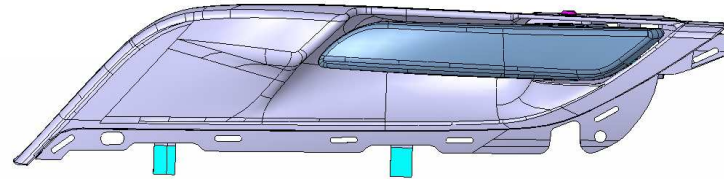
- Good reference opportunity for next projects.
- Chance to integrate Nuvia Protection Products into the project
- Good reference opportunity for next projects.

Assembling of Door Handles

- **Project:** BMW F48/49
- **Client:** ITW
- **Site:** ITW PRONOVIA, s.r.o. Velká Bíteš
- **Budget:** € 0,316 M
- **Scope:**
 - Two machines – left and right version
 - Weiss turn-table
 - Automatic assembling
 - Automatic feeding of some parts
 - Greasing of parts
 - Testing of finished handle – torque versus angle
 - Laser marking of finished parts
 - Cycle time 15s

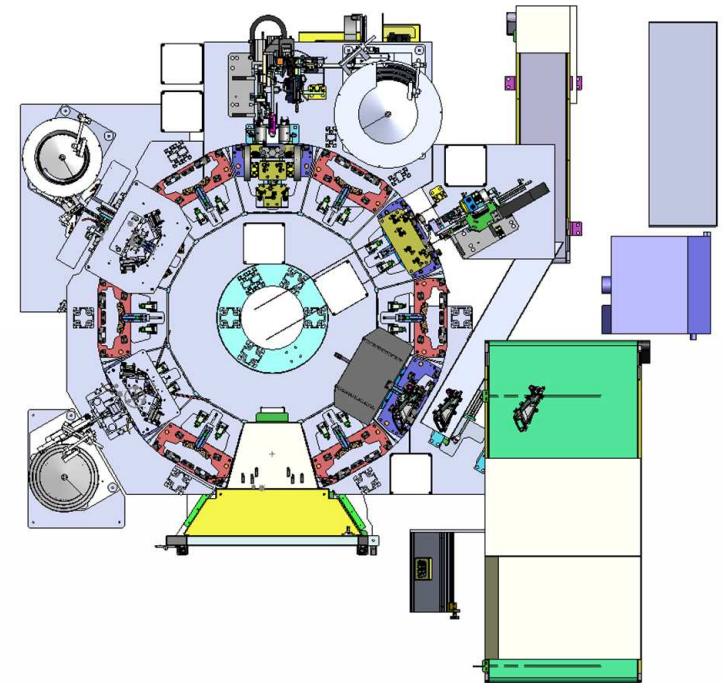
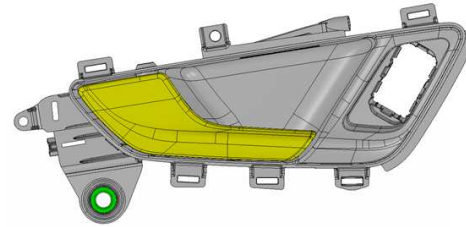
KEY POINT

- Automatic assembling of spring and pin
- Completion in 01/2015



Assembling of Door Handles

- **Project:** Audi Q7
- **Client:** ITW
- **Budget:** € 0,185 M
- **Site:** ITW PRONOVIA, s.r.o. Velká Bíteš
- **Scope:**
 - Weiss turn-table
 - Automatic assembling of spring and pin
 - Automatic feeding of some parts
 - Greasing of parts
 - Testing of finished handle – torque versus angle
 - Laser marking of finished parts
 - Cycle time 20s



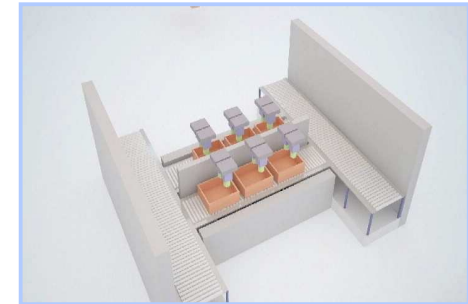
KEY POINT

- Automatic assembling of spring and pin
- Completion in 02/2015

METRODECOM - Metrology for Decommissioning of Nuclear Facilities

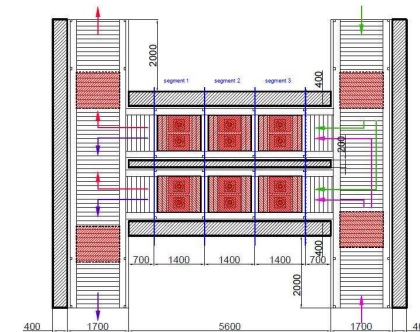
EMRP ENV-54 PROJECT

- **Scope:**
- Radionuclide characterization of materials present on decommissioning sites, automated gamma spectrometry.
- Pre-selection of waste into streams (repository or potential free release).
- Implementation of 'free release measurement facility' on decommissioning site, scanning of heterogeneous wastes.
- Monitoring at radwaste repositories and decommissioning sites.
- Calibration reference materials and standard sources.



KEY POINTS

- Start in 08/2014.
- Installation – summer 2015.
- Location – ISPRA (kick-off meeting is planned soon)
- Important R&D project





Upcoming Projects

Decommissioning of hangars H1 & H2 in Vinca nuclear site

- **Project:** Implementation of radioactive waste processing and decommissioning activities at the Vinca site, Serbia
- **Country:** Serbia
- **Client:** IAEA
- **Site:** Vinca, Serbia
- **Estimate price:** € 2 M
- **Scope:**
 - Reconstruction of waste processing facility, retrieval, characterization and treatment of historical radioactive waste (RAW), decontamination of old RAW storages – hangars H1 and H2, dismantlement of hangar H1, transport of all waste to temporary storage (hangar H3) for long-term storage.



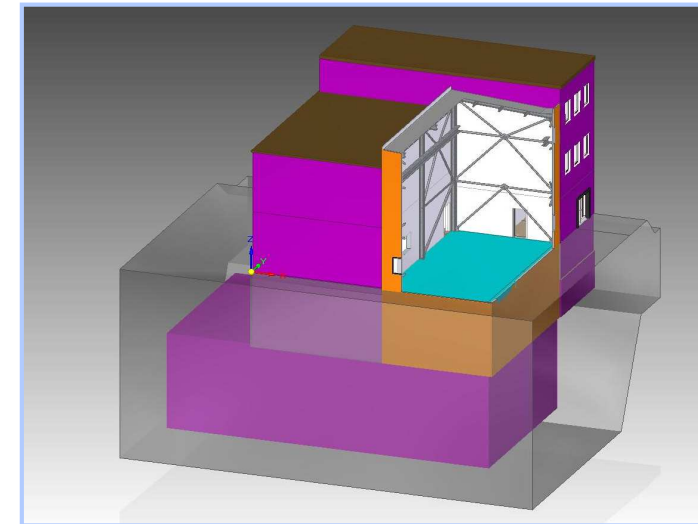
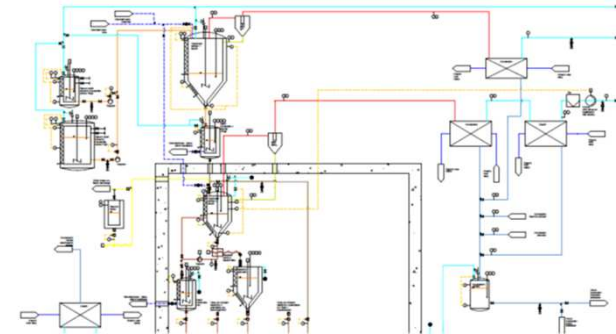
KEY POINT

- Successful implementation will increase our value in other currently planned Vinca site decommissioning projects.
- New market with good potential.
- Good opportunity to establish co-operation with local companies for next decommissioning projects in Serbia.

ETL for Liquid RadWaste Processing



- **Project:** Experimental Technology Line for Processing of Liquid Radioactive Waste
- **Client:** CV Řež
- **Site:** Řež near Prague
- **Facility:** SUSEN
- **Budget:** € 5 M
- **Scope:** Evaporators, extruders, material transport lines, reservoirs, control and monitoring system.



KEY POINT

- Competitive dialogue process.
- Technical specification's particularization.
- No competitors.
- The final bid submitted in November 2014

Centre of Nuclear Medicine in Russia

- **Project:** Construction of Nuclear Medicine Centre
- **Country:** Russia
- **Client:** Favea Europe
- **Site:** Dmitrov, near Moscow
- **Estimate budget:** € 60 - 70 M
- **Scope:**
 - General technology supplier for
 - Radiopharmaceuticals production
 - Cancer treatment
 - Diagnostic, radiotherapy
 - Conceptual project processing (co-operation with ÚJV Řež).



KEY POINT

- ENVINET – general construction supplier.
- Financing via Czech Export Bank – credit approval in 05/2014.
- Participation at the conference GEP in Moscow on September, presentation of ENVINET's experiences in this area to the large international audience.

Laboratory Furniture, Equipment and Tools

- **Project:** Design, Supply and installation of laboratory furniture, instruments, equipment and tools
- **Country:** Turkmenistan
- **Client:** ASKIN & CO GesmbH, Austria (for Central State Laboratories of Ministry of Health)
- **Site:** Ashgabat
- **Estimate price:** € 10 M
- **Probability** 90%
- **Scope:**
 - Design of laboratory furniture.
 - Laboratory measure instruments, equipment.
 - Laboratory measure methods, Laboratory information system.

KEY POINT

- Very lengthy decision-making process.
- Complicated project with a several intermediaries.
- Rich country, very specific environment.
- Last version of contract– still waiting for decision.



BIOCEV - Biotechnology and Biomedicine Center of the Academy of Sciences and Charles University in Vestec

- **Project:** Supply and installation of laboratory furniture, BIOCEV
- **Client:** Institute of Molecular Genetics of the ASCR, v. v. i.
- **Site:** Praha
- **Estimate price:** € 3,4 M
- **Probability**
- **Scope:** Comprehensive equipment of new two built pavilion.
 - Furniture, fume hoods of various types, instruments...
 - Installation of new smart fume hoods developed by ENVINET.

