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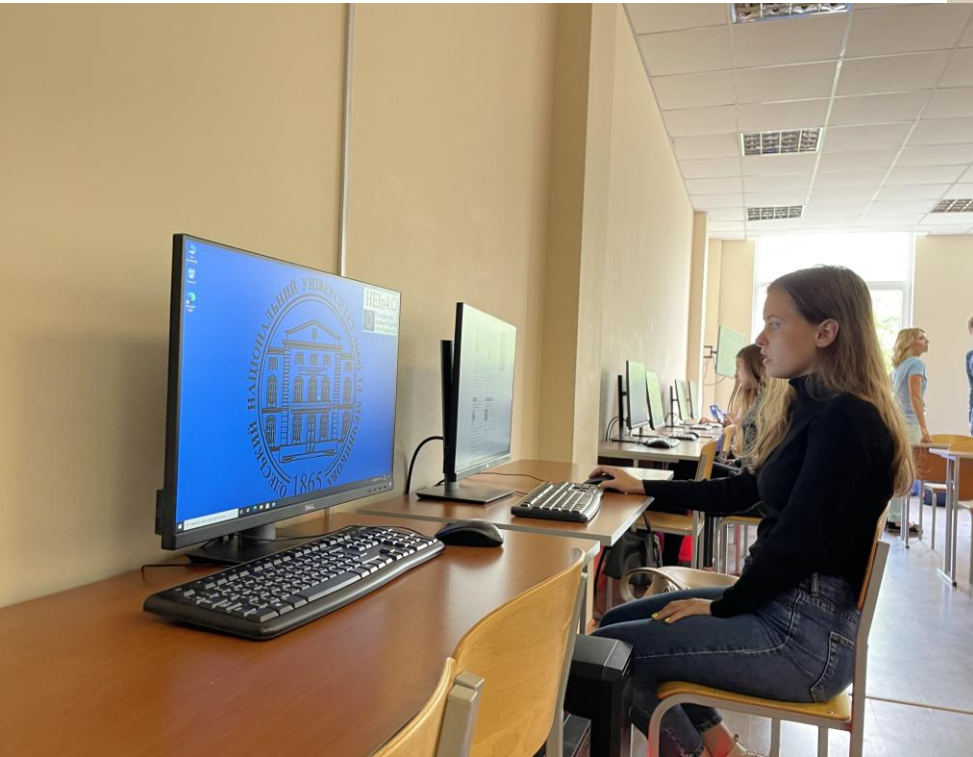
Virtual Factory Learning Lab Industry 4.0



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SPECIALISED CLASSROOM VIRTUAL LEARNING FACTORY INDUSTRY 4.0

<http://onu.edu.ua/uk/mizhnarodne-spivrobitnytstvo/ctvoreno-spetsializovanu-audytoriiu-virtualna-navchalna-fabryka-industry-40>

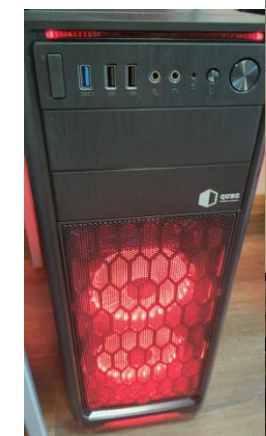


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MAIN TYPES OF FACTORIES

- Training factories in the narrow sense are physical
- Training factories in a broad sense are virtual training factories



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INDUSTRY 4.0 TEACHING METHODS*

	Alternatives (Teaching Methods)	Ai	Range
M17	Project-Based Learning - PBL	0.08595	1
M18	University/Industry	0.08366	2
M16	Multidisciplinary teamwork	0.07554	3
M7	Flipped Classroom	0.06810	4
M11	Simulation	0.06780	5
M12	Learning game / Serious game	0.06629	6
M15	Collaborative learning	0.06299	7
M10	Problem oriented learning	0.06092	8
M13	Scenario-based learning	0.06092	9
M9	Integrated Experimental Teaching	0.06064	10
M5	Discovery-based learning	0.05539	11
M14	Practically based learning	0.05345	12
M8	Hybrid technologies; added reality/ New Technologies(Interactive 3De-Book)	0.05201	13
M6	Cases	0.03955	14
M3	Heuristics	0.03197	15
M4	Negative Learning	0.02940	16
M1	Blended Learning	0.02396	17
M2	eLearning / Distant Learning	0.02308	18

*Rui T. Yoshino , Marcela Marçal A. Pinto , Joseane Pontes , Fernanda Tavares Treinta , João F. Justo & Max M. D. Santos (2020) Educational Test Bed 4.0: a teaching tool for Industry 4.0, European Journal of Engineering Education, 45:6, 1002-1023, DOI:10.1080/03043797.2020.1832966



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VIRTUAL AND AUGMENTED REALITY



Джерело: Boosting Virtual Reality Learning within Higher Business Management Education
www.vrinsight.org



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VR CHAT

- VRChat - free multiplayer computer game for virtual reality devices, developed and published by American developers Graham Gaylor and Jesse Jodry.



The game is compatible with platforms such as Oculus Rift, Oculus Rift S, Oculus Quest, Oculus Quest 2, HTC Vive, Windows Mixed Reality and Valve Index via SteamVR.

It is noteworthy that VRChat supports tracking the entire body of a humanoid avatar with Vive Trackers, although these accessories are not required for games.

VRCHAT

- VRChat - is a free mass online virtual reality social platform. A large number of virtual worlds created by the community. Available (more than 50,000 worlds, can be built using the Unity SDK). Full 6DoF with surround sound.

Цільова аудиторія

- Target group: the general public. Also suitable for students, teachers, coaches and virtual teams to some extent (VRChat is exciting but extremely informal).

CHARACTERISTICS



- Creating an avatar
- Session planning
- Multiplayer online platform
- Setting up your own world
- Add friends and chat with them from around the world

PREVIOUS KNOWLEDGE

- To use this platform effectively, little or no prior knowledge is required.
- Basically, you need basic VR skills (how to do it, download, configure, install navigation).
- The application can be downloaded directly from the store. Basic navigation skills with a virtual environment would be useful for effective use of all program features.



The application allows you to interact with multiple users, which means that different users can connect and interact together with this VR application, which allows group interaction. For example, a coach can interact with students in his class. The peculiarity of the group is that it demonstrates the dynamics of communication.

Interaction and pedagogical opportunities offered by VR for education.

The application also provides a high level of immersion and engagement.

high immersion

repeated interaction with the user

group interaction



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RECOMMENDATIONS



- Since VR Chat is a multi-user program, it is advisable that for the first time gaining experience, the trainer has created an appropriate "virtual reality world" in the application and inviting users to join.
- The trainer can slowly introduce more and more opportunities into their settings and demonstrate the dynamics of group interaction.

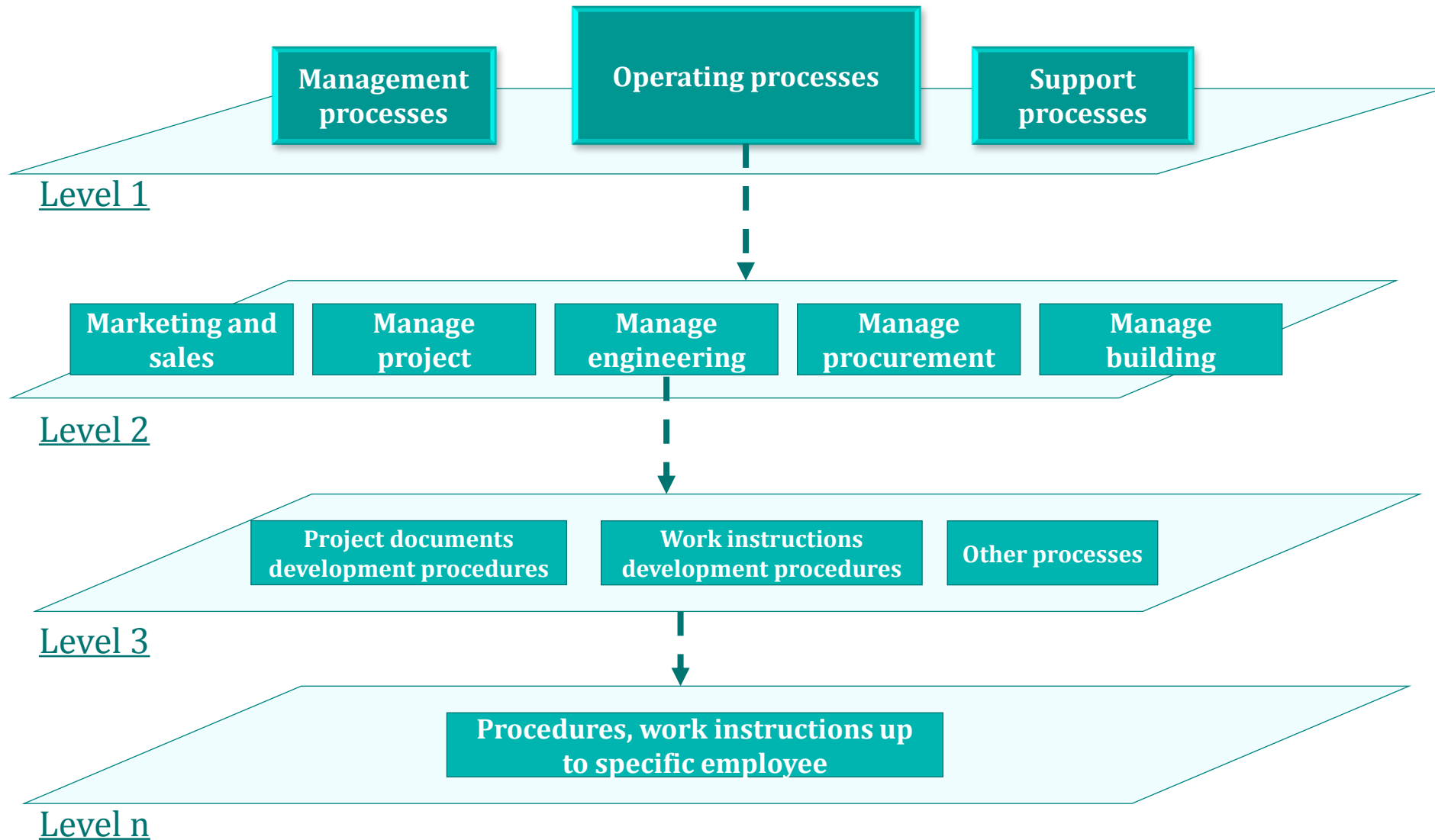
VR CHAT



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PROCESS HIERARCHY IN PROCESS MODEL



Генеральний дистриб'ютор Business Studio
на території України

ФОП КУШКО В.М, м. Кременчук

СЕРТИФІКАТ

засвідчує, що доктор економічних наук, професор кафедри менеджменту та інновацій,
Координатор проекту ERASMUS+ «Посилення ролі ЗВО у промисловій трансформації до парадигми
«Індустрія 4.0» у Грузії та Україні (HEIn4)» (609939-ERP-1-2019-1-BE-ERPKA2-SVNE-JP) в Одеському національному університеті ім. І.І. Мечникова

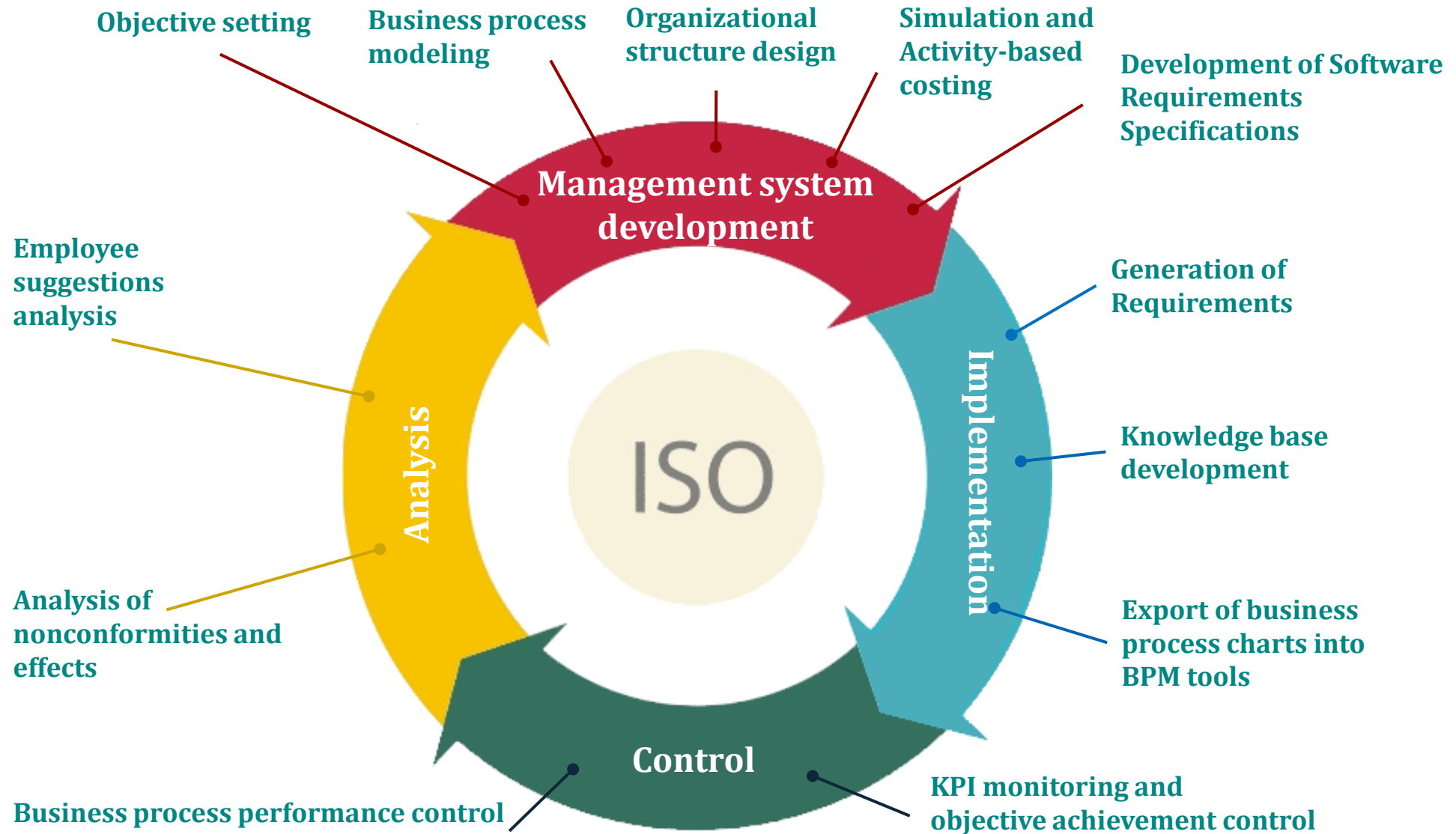
Ненно Ірина Михайлівна

пройшла триденне навчання тривалістю 24 години за навчальним курсом
«Проектування бізнес-архітектури компанії в **Business Studio**».



В.М. Кушко 30.04.2021

COMPANY IMPROVEMENT CYCLE (PDCA)



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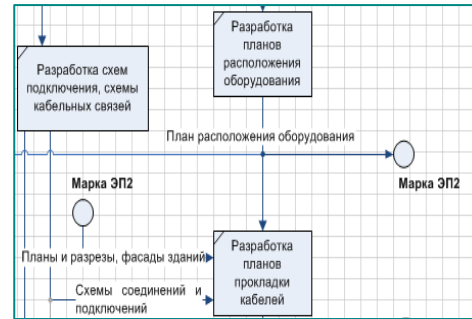
BUSINESS STUDIO



- Irrelevant Requirements;
- Unregulated performance;



Business process modeling in Business Studio



Automatic generation of Requirements based on business process models, generation of engineering activity classifiers and registers



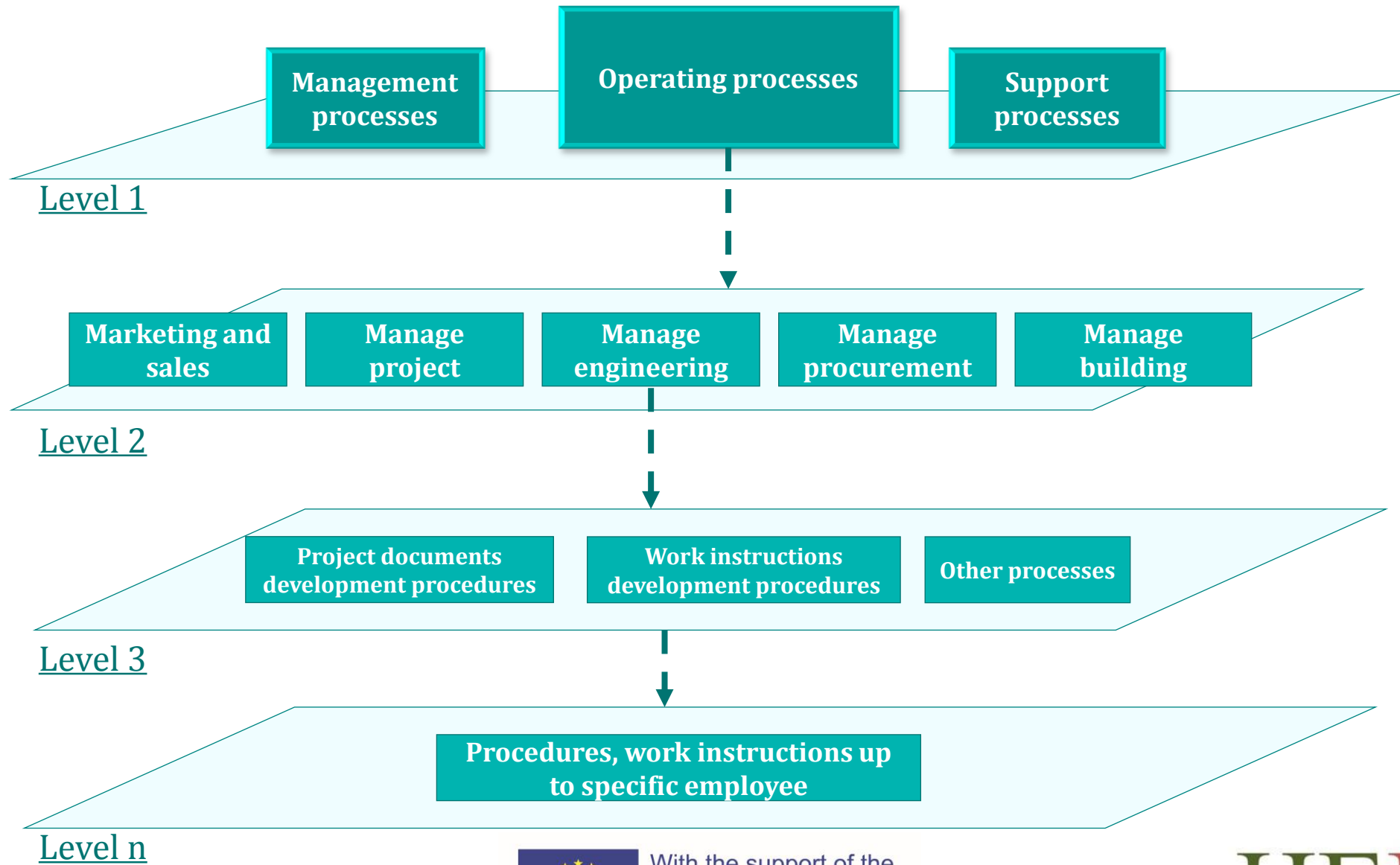
Use of interactive models, documents, organizational structure information, personal account through Business Studio Portal



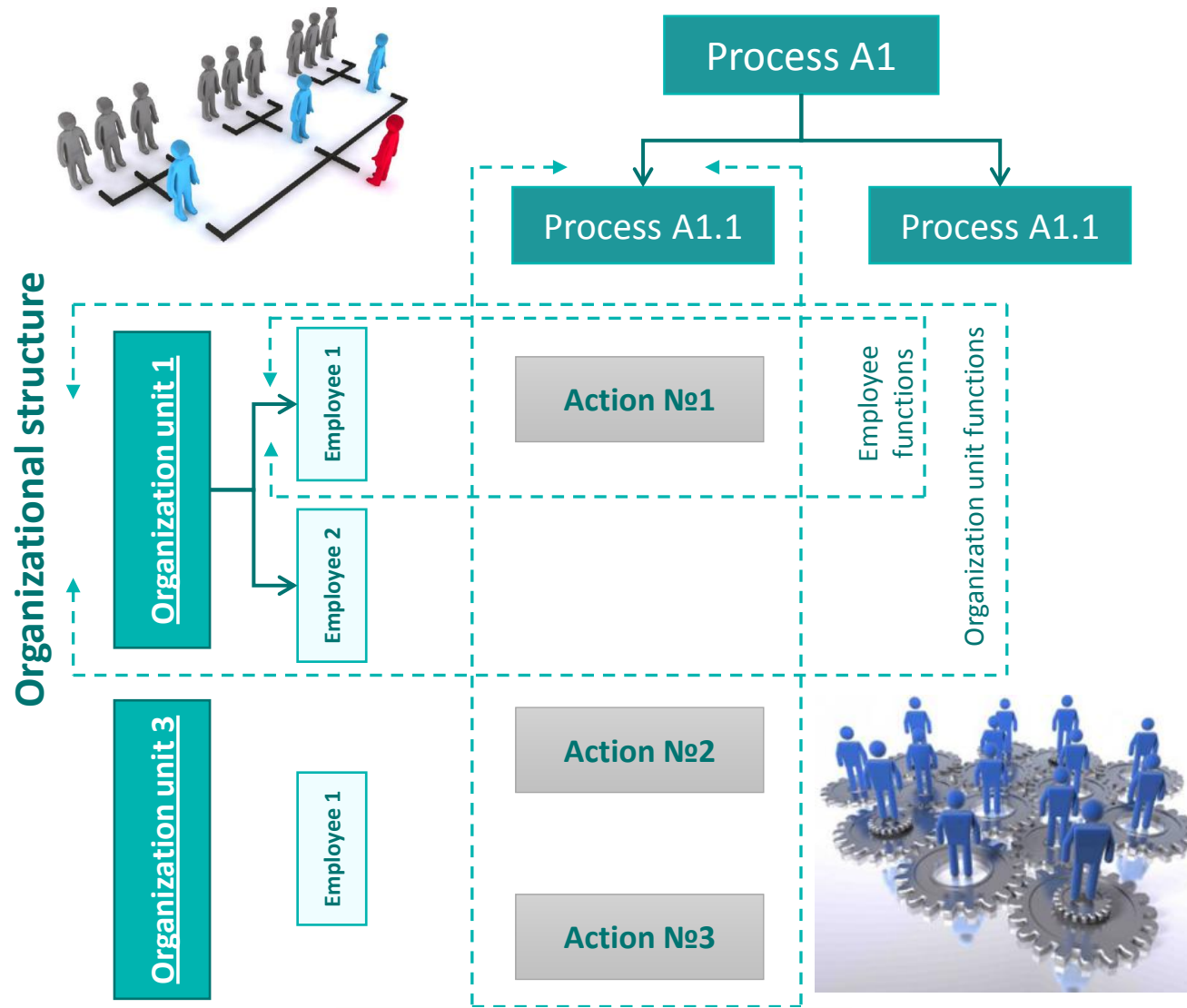
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PROCESS HIERARCHY IN PROCESS MODEL



BUSINESS PROCESSES AND ORGANIZATIONAL STRUCTURE RELATIONS



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OTHER TOOLKITS:

- www.strategyzer.com – Business Model Canvas
- Stakeholders map template
- Double diamond prototyping
- [Universities of the Future – Universities of the Future](#)
- <https://smear.ning.com/stresstesttool>



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THANK YOU



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