

# Presentation of Ukraine on Hannover Messe

## *The draft concept*

*This document is designed to ensure the alignment of all Ukrainian stakeholders with regard to the 1st big Ukrainian intervention of Hannover Messe. Many statements are to be discussed and agreed to be in line in key messages, in preparation of communication tools and means, and also orientation of key actors as APPAU, EPO, Ukrainian booth participants and other Ukrainian State bodies.*

## 1. What is Hannover Messe

Hannover Messe (HMI) is the biggest Industrial hi-tech fair worldwide, <https://www.hannovermesse.de/en/>. Since 2014 HMI is more and more segmented by Industry 4.0 sub-segments. It includes the mix of 2 categories

- Pure technologies with regard to any Industry: Industrial Automation, Process automation, Additive Manufacturing, Digital platform, VR/AR, Robotics, Drive technology, E-mobility, Electrical Power technology, Fluid power, Linear technology, Logistic Automation, Material Handling, Metal parts, components and solutions,
- Rather trends and relative services - Future of work, Innovative materials, Industrial startups, IT Consulting, Trade and investment, Research and development.

All these topics are presented through 27 halls (>50 hectares). Main [facts](#) about HMI

- >200 000 visitors every year
- 1400 events
- 80 forums and conferences
- 6000 exhibitors

HMI is the biggest European and worldwide industrial hi-tech trade fair. However, it should not be confused with other industrial fairs which are plenty in Europe. For instance,

1. Focused on an industry (e.g. [METEC](#) – is #1 trade fair in Metallurgy)
2. Focused on just a common industrial area (e.g. [Logimat](#) is about logistic and material handling)
3. Focused on hi-tech or innovation topics (plenty in Europe)

So, HMI is the vitrine of **industrial hi-tech technologies**. Businesses come here to search or demonstrate the top-level in every aspects of modern Smart Manufacturing.

## 2. History of Ukraine on HMI

Ukraine was presented on HMI last time > 10 years ago (exact info is not available). Ukrainian exhibitors are rare on HMI, typically there are 3-10 firms depending on a year, and rarely demonstrating hi-tech level. Only in 2019 we saw 1<sup>st</sup> presentation of 3 hi-tech companies on HMI, they were Infopulse (software service company), IT-Enterprise (SW product) and Lemberg Solutions (SW & HW services).

From another side, there is big **flow of HMI visitors** from Ukraine. APPAU estimates it in as 300-400 persons yearly. The biggest flow is ensured by regular delegation of UA industrial end users organized by German brands presented in Ukraine. They are Rittal (60 UA customers every year), Festo (10-20), Phoenix Contact (10-20), Bosch (up to 10), Siemens (up to 10), Kaeser Kompressoren (5-10) and some others.

Many industrial developers from Ukraine and system integrators come on HMI independently as visitors.

Resuming, we can say that HMI is well known by Ukrainian industrial and hi-tech actors. But Ukraine is almost unknown for EU and international communities of industrial high tech. It means that nobody understands our **positioning on Industrial high tech arena, value proposition, key advantages, key actors, actual opportunities** and so on. Just because it is not existing, even inside of Ukraine.

From another side, 1<sup>st</sup> presentation of Ukraine on HMI-2020 is great opportunity to develop all that and fix-up at the national and State level. In such case, these strategic statements will serve to many other Ukrainian manifestation on international arena. But first at all, it is need to synchronize and align messages of all key representative from Ukraine, Ministry of Economic development and trade, Export Promotion Office, APPAU and all our booth's exhibitors.

## 3. The main concept of Ukrainian presentation on HMI

It is already planned, that the main messages from Ukraine will be announces and disseminated through 3 main consecutive stages, planned in the project supported by USAID

1. Early stage (Feb-March), PR-campaign to form awareness in Ukraine, and to unite and consolidate all internal stakeholders
2. HMI itself. Beside of the booth, there is a big German – Ukrainian conference under preparing. From UA side, we expect participation of vice-Minister of MEDT Taras Kachka.
3. Final campaign (May-June) should finalize our participation, and also validate (or break) our strategic statement about positioning and value propositions.

### 3.1 Current discourse

There are 2 options of our strategic statements development -

- 1) the general one, focused on the general statement of Ukrainian Export strategy. Attractiveness of Ukraine as country with big industrial potential, qualified and strong workforce, strong IT-industry are the main statements in it. If we follow this way we should develop proving stats & facts and relative messages, including presentation of this industrial

potential, and specified by legacy industries as Machine-building, Aerospace, Power engineering and so on.

- 2) Specific to HMI topics where Ukrainian position and Value proposition should be developed **exactly in line and relevant to HMI hot topics.**

So, the difference between 2 options is in understanding of the **relevance** notion. APPAU says the the general discourse about general Ukraine potential is highly irrelevant to HMI discourses and so far, **it is harmful to the interests of Ukrainian business stakeholders and Ukraine's image.**

The relevance should be reached with regard to

- 1) matching 1:1 to HMI agenda
- 2) The thorough estimation of real UA potential, assets and opportunities in Industrial hi-tech fields with the focus on the best one
- 3) the development of 'right messages' helping to communicate and attract target audience to those assets

### 3.2 APPAU's estimation of best assets and potential of Industrial hi-tech

APPAU's analysis and estimation of Ukrainian best assets and competitive advantages are done in 2 documents (on Ukrainian)

- [Project of National strategy Industry 4.0](#) ([here](#) is short presentation on EN)
- [Landscape Industry 4.0 in Ukraine](#) (EN version is under preparation)

Briefly, in those analysis APPAU says that in short-term Ukraine **has no or very small chances to be serious and competitive player on the arena of Industrial Engineering as provider of machines & technologies (equipment)**. All those segments were in fast degradation in Ukraine last 10 years, and these processes were speed-up since 2014. If Industry 4.0 is about digitalization and innovation, Ukrainian machine-builders are among last in Europe by the level of investment in R&D. There was an additional analysis on this theme in 2018, see the report '[Industry 4.0 and Ukrainian machine-building](#)' (Ukr). There are NO machine-builders on the last Ukrainian Landscape 4.0. Situation has not been changed during 2018-19, Ukrainian manufacturers of hi-tech products are rather laggards on the arena of Industry 4.0.

The reasons of such situation come out of this report.

In opposite, Ukraine still have strong positions in Services area. It means all kind of services in Industrial Engineering where is the main focus of Industry 4.0

- R&D: research and innovation by different applications
- Basic and detailed design (mechanical, electronic, construction, automation and others)
- Software engineering and software development
- Hardware engineering
- Manufacturing of pilot innovative devices (in small quantity or unique)
- Control System integration
- IT integrations
- Engineering services, including turn key construction of industrial plants

90% of innovators on the Landscape 4.0 are from those segments. The best and fast growing companies in our Landscape 4.0 have strong engineering expertise and set of services. From one side we have strong companies (already exporters) with strong Industrial and Process Engineering, they are such companies as Techinservice Group, Infocom Ltd, KB Yuzhyi, Chervona Hvylya and other. From another side, we have well know leaders from IT field (software engineering), such as IT-Enterprise, Luxoft, SoftElegance and Infopulse.

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All these facts and trends indicate that Ukraine should look its current positioning in the domain of Industrial hi-tech services, but not Machines, Equipment or full-cycle Technologies.

### 3.3. The concept 'Smart integration into GVC'

This concept is based on our advantages that can be easily recognized and evaluated by German and other EU stakeholders (it is a suggestion), where we are talking about **integration into global value chains (GVC)**. The term 'smart' means 3 things

- Ukrainian focus and perspectives should be on high added values engineering services . It is opposite to the State strategy of 'cheap labor' from past years, as well as to 'IT is #1' without any regards to manufacturing context. Both such strategies are highly irrelevant in the context of HMI topics
- It should be based on thorough analysis of best opportunities in EU with regards to set of existing programs at pan-European and European countries levels. That means we consider all so called 'enablers' and shape them to our perspectives of integration.
- Ukrainian stakeholders should be enough pragmatic with regards to real status of our innovative positions in Industry 4.0 but enough ambitious to change their position from the status of 'tier N' to 'tier1-3'. That means Ukraine speed-up and finish its understanding of future technologies and its place, mission and vision with regard to the future world.

At the glance, APPAU considers 5 axis of integration and internationalization (in term of priority)

#### 1) Services (=Industry as a Service)

5 sub-segments of services are to be considered

- 1) Software development. We include here 2 kind of developers, Product and 'multi-service' companies (outsourcing). This is the biggest and fast growing segment in Ukraine.
- 2) Hardware development (electronic, mechatronics, drones, mobility and so on)
- 3) Engineering design (all kinds, mechanical, electronic, construction, automation, process...)
- 4) System integration (all kind, Control system (OT), IT, OT-IT)
- 5) Manufacturing outsourcing (here, targets should be well specified)

Ukrainian engineering developers can be strong resource base for German (EU) R&D centers and industrial brands. The name 'Land4developers' reflects this idea.

#### 2) Research and technology (done through Universities and Sciences institutions)

Ukrainian science institutes already have experience of collaboration with German institutions in such sub-segments as

- 1) Research per an application
- 2) Labs research
- 3) Technology transfer
- 4) Educations
- 5) Exchange and standards

Tens of Ukrainian Universities and Science institute already participate in EU programs, in particular in Industry 4.0 area.

#### 3) Industrial startups

Here there are main topics of ecosystems and funds.

We have already many exchanges around EU programs and bi-lateral exchanges. The program TechUkraine should be enlarged with regard to this topic.

#### **4) Brand ecosystems**

In 'tiers' value chain Ukrainian developers are not 'tier 1' or 'tier 2'. This is a big issue we can overcome only through acceleration of clusterization processes. So, clusterization and smart-specialization are also topics of discussion, development and integration.

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Resuming, APPAU believes that for all these 5 directions Ukraine has much more stronger assets and potential in Hannover context comparing to classical 'Machine and equipment sales to export' (legacy industries) that is proposed to consider in scenario #1 (chapter 3.1)

#### **3.4 Development of the concept 'Smart integration'**

The big problem of resuming of current situation and profiling of right messages in communication is in availability of full picture (information).

So far, APPAU proposes that the special working group should be created including representatives of

- Export promotion office (MEDT)
- Department of industrial development (MEDT)
- German institution: GIZ Ukraine, German chamber of commerce (AHK), others
- Department of technology transfer (Ministry of education and science)
- Representatives of Industry4Ukraine and APPAU

The main goals of working group is to quickly (during February) get all relevant information through 5 axis of integration mentioned in 3.3.

Regarding possible intervention of Ukrainian booth participants, the Table 1 give some idea about their involvement and aligning to the given concept.



**Table 1. Draft projection of Ukrainian exhibitors and invited persons on the concept 'Smart integration into GVC' in UA-GE conference 21<sup>st</sup> of April**

	Categories of integration	Story from UA exhibitors, booth 'Land4Developers'	Ext help (if missing from the Booth )	Supported Facts and stats to be developed	Key messages
<b>1</b>	<b>Services (Industry as a Service)</b>				
1.1	SW development: Product	IT-Enterprise: ERP/MOM, WebHMI (SCADA)	No needs	The most competitive products 4.0	Ready for export & integration (better ratio quality price)
1.2	SW development: tech & multi-services	Lemberg Solutions	No needs	IT-sectors on global arena	Ready to develop customized SW for I4.0 apps (expertise + better ratio quality price)
1.3	HW development	UAVita, Smartico	No need	Review of HW/ manufacturing facilities	The same for HW
1.4	Eng design	Infocom Ltd		Review of Eng. Design landscape	The same for Design
1.5	System integration	Infocom, RWA, Elaks		Review of System Integrator landscape	Ready for integration into contracting schemes (expertise + better ratio quality price)
<b>2</b>	<b>Research and technologies</b>				
1.1	Research by application	TBD	TBD with Ministry of Science	Potential of Universities and Science / success stories of collaboration in 4.0	TBD <i>Needs: Technopark in Ukraine</i>
1.2	Technology transfer	TBD	TBD with Ministry of Science		TBD
1.3	Education and standards	Queedo Robotics / Twinning with DIN (GIZ)	TBD with Ministry of Science		Ready for collaboration in pan-european and EaP programs
<b>3</b>	<b>Industrial startups</b>				
1.1	Ecosystem	Queedo Robotics (Regional Center 4.0)	Unit.City	Review of ecosystems of Industry 4.0	Ready for collaboration & extension of DIH <i>Needs: support of DIH on Ukraine through our network Center 4.0</i>

1.2					
4	<b>Brand ecosystems</b>				
1.1	Partnering with GE brands	Infocom Ltd. ELAKS (Siemens)	No need	Review of GE partners in Ukraine / their potential	Ready for collaboration & extension of DIH <i>Needs: program of integration into IIoT platforms</i>