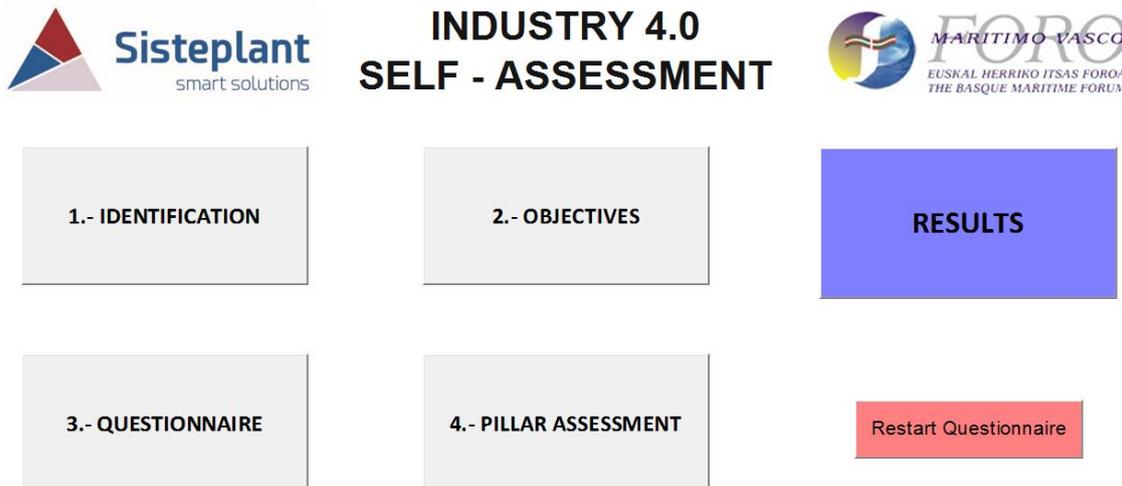# Industry 4.0 Self-Assessment

By Sisteplant

The aim of the following document is to provide some tips and advice for the correct use of the Excel based tool *Industry 4.0 Self-Assessment*, developed by Sisteplant. The tool is composed of two main parts: The Questionnaire, where several questions are asked to acquire the information needed; and the Results, where the potential improvements desired by the client are defined and the steps to achieve them are explained.

When the tool is started, a simple screen will appear (picture below). It is mandatory to complete all the forms before you click the *Results*. It is recommended to complete the forms in the given order. You can change any of the answers as many times as you want before clicking *Results*. After that, no changes are allowed. You can check your answers before clicking *Results*. You can also delete all the answers clicking *Restart Questionnaire*.

Details of each box are listed below:

1- <u>IDENTIFICATION</u>:

Except for the Company name, for the rest of the questions the answers must be chosen from the options given (drop down menu).
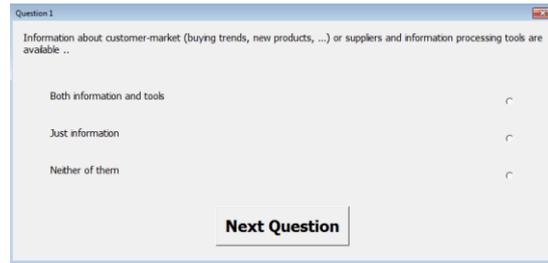

2- <u>OBJECTIVES</u>:

The user must choose the objectives that he/she is more interested in. It is possible to choose all of them.
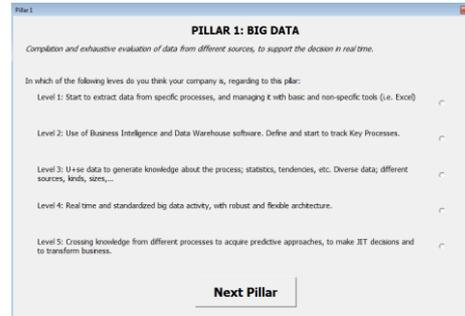
3- <u>QUESTIONNAIRE</u>:

A sequence of 36 general question are asked. It is possible to move from one question to the other without answering it. To get the results all of them must be answered. Multiple answers are not allowed.
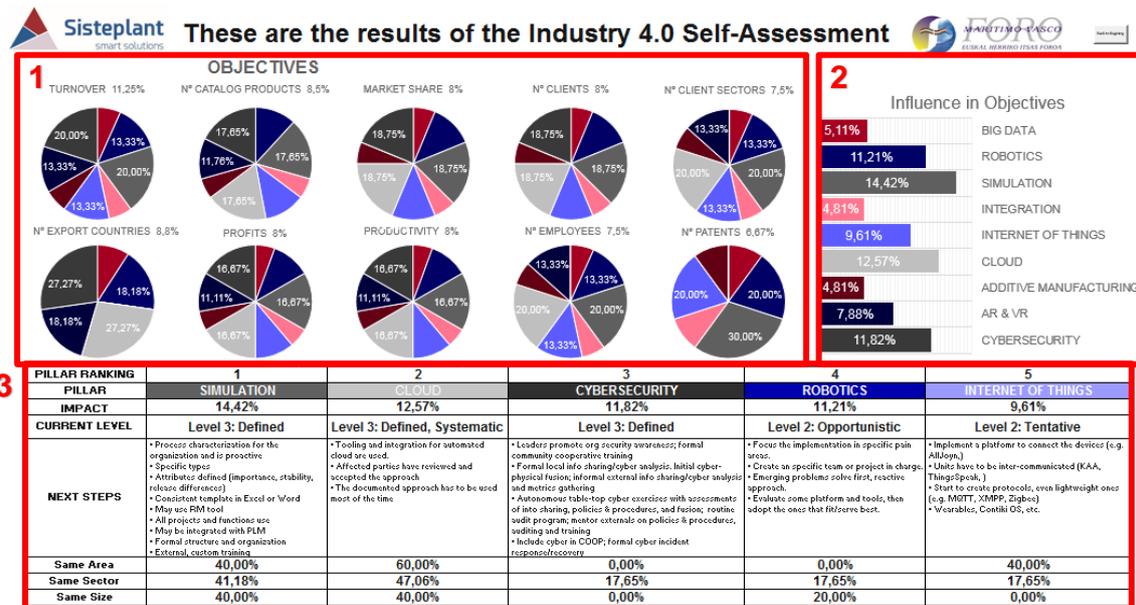

4- <u>PILLAR ASSESSMENT</u>:

The user needs to select a level for each pillar in which he/she sincerely thinks his/her company is, regarding the pillar described. Multiple or intermediate answers are not allowed.

Once all the questions are answered the *Results* button will be unlocked and the following screen will appear:

PILLAR RANKING	1	2	3	4	5
PILLAR	SIMULATION	CLOUD	CYBERSECURITY	ROBOTICS	INTERNET OF THINGS
IMPACT	14,42%	12,57%	11,82%	11,21%	9,61%
CURRENT LEVEL	Level 3: Defined	Level 3: Defined, Systematic	Level 3: Defined	Level 2: Opportunistic	Level 2: Tentative
NEXT STEPS	• Process characterization for the organization and is proactive • Specific types • Attributes defined (importance, stability, release differences) • Consistent template in Excel or Word • May use RM tool • All projects and functions use • May be integrated with PLM • Formal structure and organization • External, custom training	• Tooling and integration for automated cloud are used. • Affected parties have reviewed and accepted the approach • The documented approach has to be used most of the time	• Leaders promote org security awareness; formal community cooperative training • Formal local info sharing/cyber analysis. Initial cyber-physical fusion; informal external info sharing/cyber analysis and metrics gathering • Autonomous table-top cyber exercises with assessments of into sharing, policies & procedures, and fusion; routine audit program; mentor externals on policies & procedures, auditing and training • Include cyber in COOP; formal cyber incident response/recovery	• Focus the implementation in specific pain areas. • Create an specific team or project in charge. • Emerging problems solve first, reactive approach. • Evaluate some platform and tools, then adopt the ones that fit/serve best.	• Implement a platfomr to connect the devices (e.g. AllJoyn,) • Units have to inter-communicated (KAA, ThingsSpeak,) • Start to create protocols, even lightweight ones (e.g. MQTT, XMPP, Zigbee) • Wearables, Contiki OS, etc.
Same Area	40,00%	60,00%	0,00%	0,00%	40,00%
Same Sector	41,18%	47,06%	17,65%	17,65%	17,65%
Same Size	40,00%	40,00%	0,00%	20,00%	0,00%

1- <u>OBJECTIVES</u>: For each objective (pre-selected by the user); the potential improvement and the impact of each pillar in that improvement is shown using pie charts; check legend in nº 2 for further details.
2- <u>INFLUENCE OF PILLARS</u>: Using a bar chart, the influence of each pillar in the overall improvement is shown. It is also used as a legend.
3- <u>TOP 5 PILLARS</u>: The 5 most influential pillars for the objectives desired by the user are analysed. In each of them; the overall impact, the current Industry 4.0 level of the company and the required steps/tips to achieve that improvement are detailed. Furthermore, a comparison between the user's company and the rest of the market is exposed, which shows the % of similar companies (same Geographic area, Size or Sector Activity) that have developed projects in each industry 4.0 pillar.