PRODUCTS OF THE INDUSTRY 4.0 COMPETENCE CENTERS

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Branch competence centers are organization and jurisdiction forms of company activity to unite digital, smart and virtual factories of the Industry 4.0 according to its specialty. Branch competence centers are for huge infrastructure projects solution where the result is not only the item itself (high-tech product) but also professional cadres, new types of technologies, new forms of the production data representation and other. There is the Industry 4.0 products classification and also specializations of the branch competence centers which are meant to be implemented into the industry by the first hand. Actual for the Industry 4.0 competence centers in digital projection are digital production competence centers, item exploitation accompanying competence centers and standardizing and certification competence centers of products and technologies. There are schemes of the digital companies interaction and the most probable branch competence centers in the item designing industry results are defined.

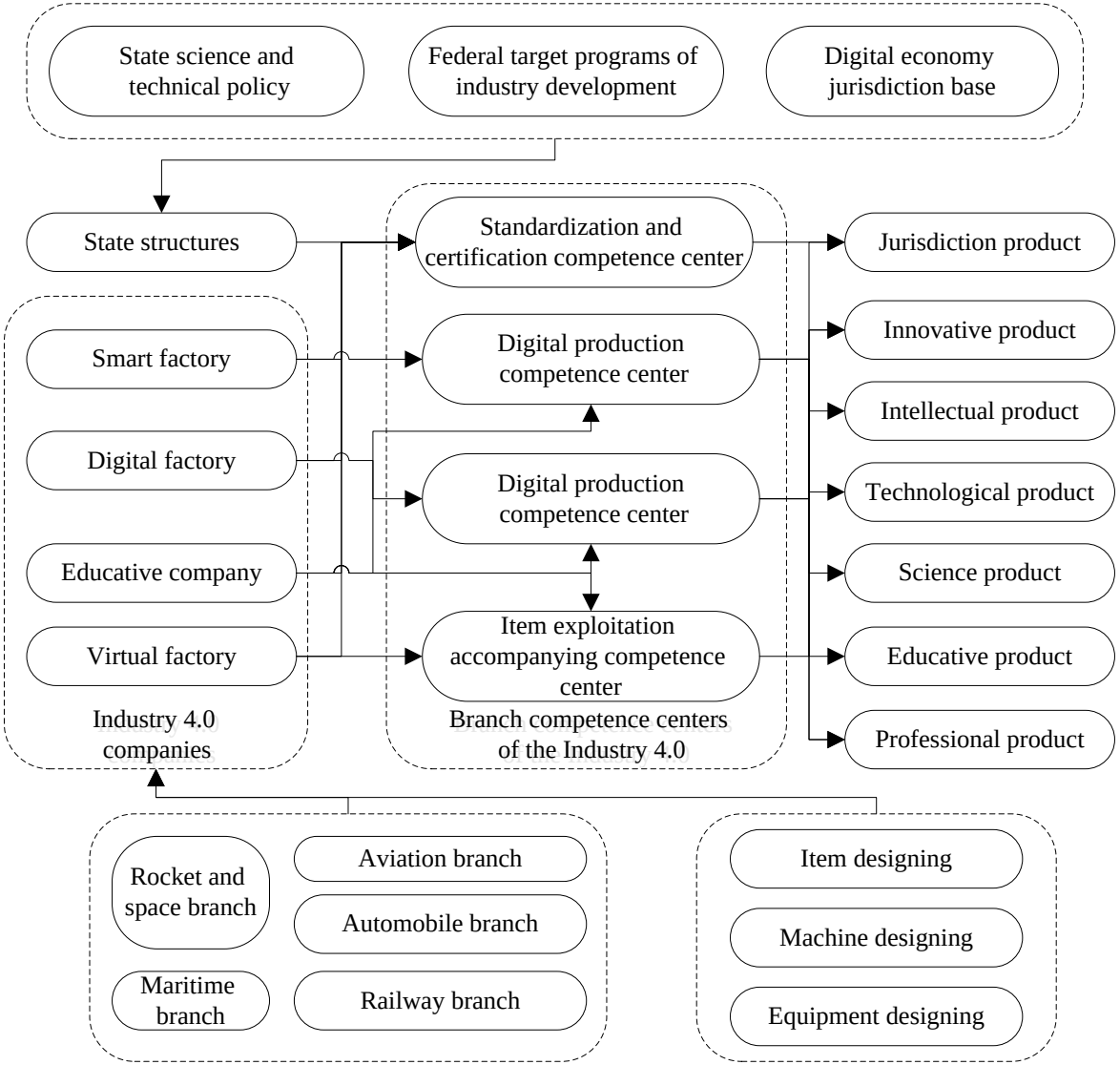

Figure 1. The Industry 4.0 organization interaction scheme within the branch competence center.

Development state program (digitalizing) of the industrial economy sectors of leading countries must solve the task of production complex industrialization. Which means to create new type of high-tech products with high added value is impossible without preliminary and sometimes parallel solving of several collateral tasks which are from organization, methods, technologies and other types of project and production activity provision in the paradigm of the Industry 4.0.

Production industrialization complex character can be seen clearly when the key factors are found (development drivers) to define the behavior strategy of the main say rocket and industry and some parallel industry branches. Scientific tasks for a designer of the main industry branch create secondary technical solutions in radio electronics (create new components), item designing (create new items), material study (development of nanotechnologies) and other.

The main industry branches to define quality science and technological leap to the fourth industrial revolution (the Industry 4.0) are:

- rocket and space branch;

- aviation branch;

- railway branch;

- maritime branch;

- automobile branch and others,

which already today require the creation of special competence center based on advanced and new industrial companies and educative companies.

Automatizing implementation into industrial sector industrialization show the competitive advantages of high tech items manufactured with cyber and physical systems. Cyber and physical production oriented to manufacture the huge bunches of items (mass production) where the Industry 4.0 product cost reduces significantly. In this case, the industry developed countries will provide their products instead of expensive analogues of the developing countries manufactured with manual work or the previous generation automatizing means. Industrial companies competence engagement for consumer markets in their product realization the Industry 3.0 companies will be re-formed or shut down and their personnel must be sent for re-studying the new occupation of the Industry 4.0. The Industry 4.0 specialists preparation must be conducted by the branch competence centers in specialties.