Modernization stages of the Industry 3.0 company and projection route for the Industry 4.0 virtual factory

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The task is to create the Industry 4.0 company functioning on humanless and paperless principles of production. There are two ways how to complete this task. The option number one is to modernize the existing companies of the Industry 3.0 which means a smooth implementation into informative and production infrastructure of the company the components and technologies which guarantee a slow evolution of research and development institute and item designing companies. The option number two, the example given, is based on solution on some project tasks to choose the components and technologies in their iterative form.

There is a scheme how to modernize an Industry 3.0 company and the expected results which allow to project with existing companies new digital factories and smart factories of the Industry 4.0. There is a route how to project systematically a virtual factory of the Industry 4.0 as the main company to support all stages of the item life cycle for different industries. Modernization quality criteria for project and production companies and creation of virtual factories define the economic criterion of company activity.
**Figure 1.** The stages of modernization of project and production companies of the Industry 3.0 which must be done to create a digital factory and a smart factory of the Industry 4.0
Figure 2. System projection route of the Industry 4.0 virtual factory.