

Industry 4.0

Industry 4 Edge Computing & Cyber Physical Systems



CHALLENGES	SOLUTIONS	RESULTS
<p>Sustainable Manufacturing</p>	<p>Modular Platform for Industry 4.0</p>	<p>Decreasing Environmental Pollution, Increasing Economic Performance</p>
<p>Industry 4.0, also known as Factories of the Future (FoF) promise greener, more customized and higher quality products through demand-driven manufacturing.</p> <p>To enable FoF, the software foundations must be as modular and adaptive as the composite cyber physical systems they represent.</p> <ul style="list-style-type: none"> - Automatic re-assembling and re-configuring in response to hardware changes - Allowing rapid integration of new physical components - Robust to unforeseen environmental failures and cyber attacks and fail safe <p>The solution must be operationally simple to install, manage and scale across many manufacturing cells and geographically distributed factories. The solution must be economically sustainable.</p>	<p>The Paremus Service Fabric provides the essential modular software foundations for Industry 4.0 services.</p> <p>Built from the ground up using OSGi™, the Service Fabric is able to host both sophisticated modular applications, REST Container deployed microservices or legacy applications.</p> <p>Advanced modular AI-enabled control and monitoring services may be created and deployed to the machine edge, creating a highly adaptive manufacturing software nervous system.</p> <p>Crucially, irrespective of the sophistication and/or rate of change of the environment, the Fabric remains operationally simple to manage and maintain.</p>	<p>Allows manufacturers to cost effectively and rapidly reconfigure manufacturing plants to address new markets and consumer demands.</p> <p>To facilitate optimum production with less resource use and waste, and so less impact on the environment.</p> <p>The key enabler for networked factories and a modular manufacturing strategy: i.e., allowing autonomous reconfigurable lights-out manufacturing facilities to be located closer to consumers; linking dynamic supply chains to local production.</p> <p>Enabling human-centred manufacturing, customer-focused manufacturing, and linking products and processes to innovative services.</p>