# Space All Itd. Engineering services

6100 Kazanlak, 2 Stara Reka Str., DK Arsenal, Fl.3, office 310, <a href="mailto:spacecad@david.bg">spacecad@david.bg</a>, <a href="http://www.spacecad.bg">http://www.spacecad.bg</a>

SpaceCAD Ltd, part of DAVID Holding is Bulgarian company, Siemens partner since 1997.

Working as systems integrator, SpaceCAD is focused on providing product lifecycle data management (PLM), design & manufacturing (CAD/CAM/CAE), additive manufacturing and IIoT cloud solutions. A significant part of SpaceCAD activities includes professional engineering services for complex products digitalization, FEM/FEA simulation/optimization and CAM post-processor development. SpaceCAD activities and operations are available in Bulgaria, Germany, Austria, Turkey, Romania, Swiss, Serbia and Vietnam.

Our mission is to deliver software solutions and engineering services to demanding manufacturers looking to achieve competitiveness growth through:

- More innovations
- Higher product quality
- Lower production cost
- Shorter time to market

### **Product design**



Using the SIEMENS NX portfolio, SpaceCAD is performing the full product development cycle:

- 1. **Product definition**. This phase usually starts with a few meetings and discussions between the product designer/s and the stakeholder/s of the project, in order to define the scope of the product, understand the requirements and gather insights about the goals that the company has, not only for the product itself but for the entire business behind it as well.
- 2. **Research.** At this stage we are performing extensive study of available products, solutions and related copyrights, in order to prepare right product requirements and specification.
- 3. **Product analysis.** For examining product features, costs, availability, quality and other aspects is conducted together with potential buyer. Also, at this step the required design activities are defined, including the time required and based on this the product design quotation is prepared for the customer.



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- 4. **Product design.** Using the most powerful, flexible, and innovative product development solution in the industry Siemens NX, along dedicated CAE simulation tools we guarantee the quality trough all the features, performance, and capabilities to help the customer get the right product faster than ever before.
- 5. **Design validation.** Design for manufacturing validation help us significantly reduce engineering change orders (ECOs), manufacturing defects, costs and delays. We use NX DFMPro as high-definition 3D tools that automate and formalize the design review process for manufacturability, helping us identify design issues that are difficult, expensive or impossible to manufacture.

#### Mold tooling design



SpaceCAD offers a full-set engineering service for mold tooling design, mold filing process simulation and tool design optimization. Using Siemens NX Mold & Moldex CAE software, SpaceCAD has performed production ready services for customers in Argentina, Bulgaria, Serbia and other countries.

#### Virtual product/process prototyping

Virtual prototyping is a new key method in the process of product development. It involves using computer-aided design (CAD), computer-automated design (CAutoD) and computer-aided engineering (CAE) software to validate a design before committing to making a physical prototype. The product assembly or individual parts could be opened in CAE software to simulate the behavior of the product in the real world.



SpaceCAD performs the following virtual prototyping services:

- CFD services for fluid dynamics simulation using Mentor FloEFD
- Metal forming simulation process/tooling using Quantor QForm
- Metal Casting simulation process using ESI Group ProCAST
- Plastics forming simulation process using Moldex3d

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### NX CAM post-processors



With its long years' experience in CAM and NX, SpaceCAD has developed, tested and supported a long list of SIEMENS NX CAM postprocessors, with efficient productivity and on reasonable end user price. We have develop more than 100 Siemens NX CAM postprocessor, for broad range of CNC machines from the major CNC Machine manufacturers – *Fanuc, Deckel, Mazak, Haas, Okuma, Sinumerik* and many others. The full list of NX CAM postprocessors is available here:

http://www.spacecad.bg/media/attachments/2019/06/04/postprocessors-spacecad\_en.pdf



On-demand additive manufacturing (3D print)

Metal 3D printing eliminates the need for tooling, support structures or build plates. This makes directly printing metal parts a fast and cost-effective method of serial production when compared to both traditional and other additive processes. Our metal 3D printing materials are designed to work with existing industry processes so the parts you receive are set up for system integration.

Plus, our finishing capabilities mean your parts order is ready or near ready for direct commerce applications when you receive it. You may place your order here:

https://www.3dsys.space/3d-print-metal-offer