



TANSAM SIEMENS

CENTER OF EXCELLENCE I 4.0



*The Comprehensive
Digital Twin*





About TANSAM Tamil Nadu Smart and Advance Manufacturing Center of Excellence

The revolution in modern Industrial systems is one of the most critical business and societal changes we're experiencing. Urbanization, global environmental impacts, and government regulations are accelerating the demand for automation. Developing product with adequate range, capabilities, and multiple design variants is a great challenge. Achieving all this with the same (or lower) cost of ownership requires bringing innovations and engineering efficiency that has been unheard of in the industry - without risking safety, reliability, and quality.

We require a simulation and testing solution covering every aspect of Automation. This will not only enable companies to achieve a significant competitive advantage, ROI, and operational performance edge in developing electric vehicles but also empowers them to adapt and evolve in the fast-approaching era of new mobility.



Siemens Partner and Siemens Digital Industry Software establish, operate, enable and handed over an Industry Centre of Excellence

to Section 8 company formed by TIDCO i.e. TANSAM.

“TANSAM Centre of Excellence” is utilized by industries for spurring innovation at the grass root level. This will be a future proof for the industries and career progression training needs in the emerging technologies and best practices in par with international standards.



Additionally, the CoE will be an ideal R&D facility for industries, to adapt to future technologies with cost saving advantages unique to them. The program has three key components namely **Innovation Platform**, that enable industry to develop personalized smart products with validated performance, then **the Infrastructure Platform** that enhance industry capability to create product, process and performance twin and **the Engineering Services** that provide established industry with services to liquidate their day to day issues.

The **TANSAM Centre of Excellence** have seven specializations and establish in about 16700 square feet area at TIDEL Park Chennai, which includes: Product Innovation, Center for Predictive Engineering Analytics, Smart Factory Research, Center for Asset Performance Management (IoT) research, Research Center for Product Lifecycle



Management, Innovative Manufacturing, AR/VR /MR Research and Skill training

The Industry Center of Excellence will provide services to Start-ups and large Industrial Units on not for profit basis from the facilities created. Entrepreneurs can also use facilities (wherever spare capacity is available) for regular work on payment.



The Industry Center of Excellence is the first of its kind in India and Siemens has built a facility in China before the proposed one in Tamil Nadu. This will provide services to Large Industrial Units on subscription or one-time basis, Entrepreneurs and incubators Start-ups are welcome to use the facilities especially for their new innovation and product development, which will be based on user charges based on not for profit basis from the facilities created. Service charges shall be fixed on no profit basis. Such proliferation of industries and R&D will bring more patents for Tamil Nadu, which will be an accelerating force for Industry growth with state of the art Technology applications.

Our focus

In a world of smart, connected products, where entire markets can vanish with a

single innovation, manufacturers must take a new approach to business. Some closely watch how products are being used, and feed data back from product utilization into product ideation and development in order to anticipate trends. But even if we know what to make, we still have to make it. That is why manufacturing – the realization phase of innovation – is vital in this new era. We focus on realization this phase of innovation through technology offered by a market leader i.e. SIEMENS.

Objectives of Industry CoE:

- ✓ *To promote and aid indigenous production including design, simulate, testing i.e. to indigenise imported spare parts and components*
- ✓ *To innovate and perform R&D*
- ✓ *To incubate and support start-ups*
- ✓ *To perform prototyping*
- ✓ *To promote Industry – Academia partnership*
- ✓ *To up-skill industry manpower*

To know more details:

Website | www.tansam.org

Email | info@tansam.org

Or Scan QR Code



S No	Where we can support?	By use of which tool?	In which Domain?
1	New Product Development	NX	Computer Aided Designing
2	CAM Programming		
3	3D Modeling by Scanning	Calibry	
4	Reverse Engineering	NX+ Calibry	
5	Composite Parts designing	Fibersim for NX	
6	Development process of Complex Assemblies (including lot of fits)	Syncrofit for NX	
7	Tyre Modeling	Delft	
8	Seat Pattern development (Seat & Interior Component Designing)	Mastertrim for NX	
9	Building models for Finite element Analysis	Femap for NX	Simulation and Testing
10	FEM Solver	NX Nastran	
11	CAE Simulation & Testing	SIMCENTER STAR CCM+	
12	Predictive Engineering Analysis		
13	1 D Simulation	Amesim	
14	ADAS and AV System Simulation	PreScan	
15	Analysis of occupant safety systems in the automotive	Madymo	
16	CAD-CAE Interface	HEED	
17	Electrical Circuit Design	CAPITAL	Electrical, Instrumentation & Control system engineering
18	Wire Harness Engineering		
19	System Architect Design		
20	Integration (ALM,PLM,MCAD)		
21	Wiring Composite Technique		
22	Advanced Workstation to provide aGraphical approach to manage and control a building from an easy-to-use interface		
23	Audio Video Assistant through mobile app for vehicle remote assistance	AVAssist	Automation
24	Plant and Process Engineering (COMOS)	COMOS	
25	Automate Part Engineering	Rulestream	Digital Manufacturing
26	PLC Programming	SIMATIC (TIA)	
27	Process Simulation	Tecnomatix	Electronics Engineering
28	Plant Simulation	Tecnomatix	
29	SMT (Surface Mount Technology) Process Engineering	Valor	Plant Management
30	Application Lifecycle Management	Polarion	
31	Product Lifecycle Management	Teamcenter	Planning and Scheduling
32	Advanced Planning and Scheduling	Opcenter APS	
33	Plant Database Management and Data Security	Oracle User Enterprise	Database Management
34	Data transmission for Industry IOT	Mindconnect	Industry IOT
35	Visualize real-time data and analytics during manufacturing	Mindsphere	
36	Metal Printing using Copper, Inconel, SS, D2 tool steel	Metal X 3D	3D Printing
37	3D Printing through Robotic application	Broadline	
38	3D scanning of Large areas	Lidar	Augmented Reality
39	AR for Maintenance Training	NX	
40	AR for Process Training	Tecnomatix	Virtual Reality
41	VR for Plant and Process Engineering	Tecnomatix	
42	VR for Simulation and Testing	SIMCENTER Star CCM+	
43	VR for Healthcare	Oculus	
44	Metaverse applications	Prototype (in progress)	Industrial Robotics
45	Automated Guided Vehicles (AGVs) applications		
46	Cobot applications	Fanuc Robot CRX – 10iA/L	