

Enhancing Operational Efficiency and Asset Optimization



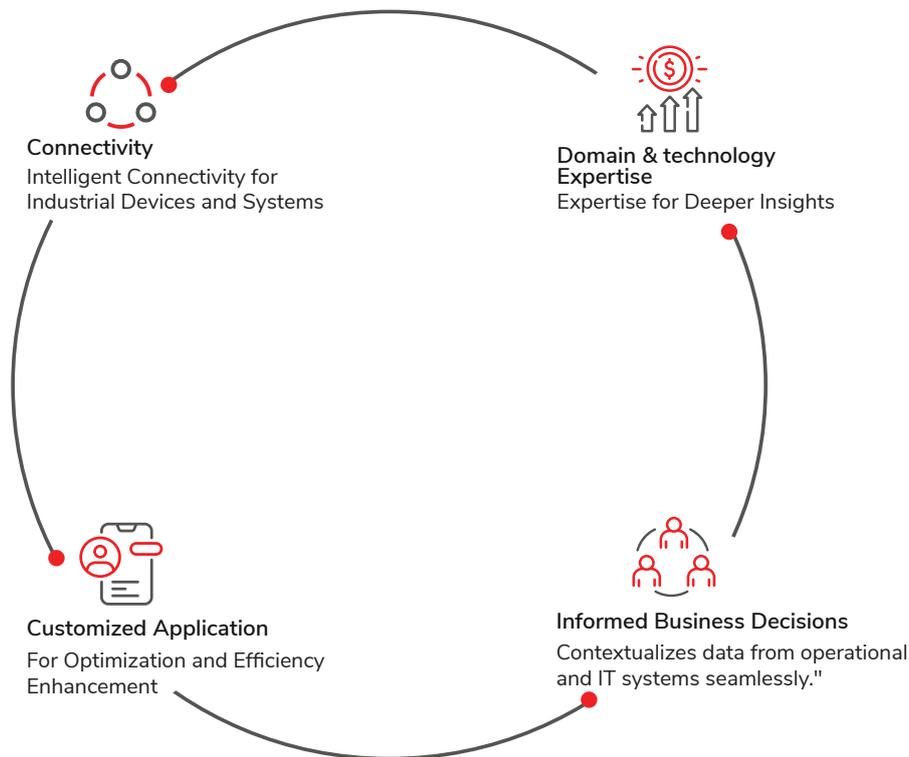
NSP Envision IoT Edge

Greater Visibility, Greater Value.

Executive Summary:

NSP combines deep domain and technology knowledge with advanced analytics to enhance your operational and business performance. Introducing NSP Envision IoT Edge – an analytics platform, user-friendly applications and implementation expertise. This application connects, collects and contextualizes data from both operational and IT systems, unlocking the value within your data for improved business results.

Step into a more productive and profitable future with NSP Envision IoT Edge solutions



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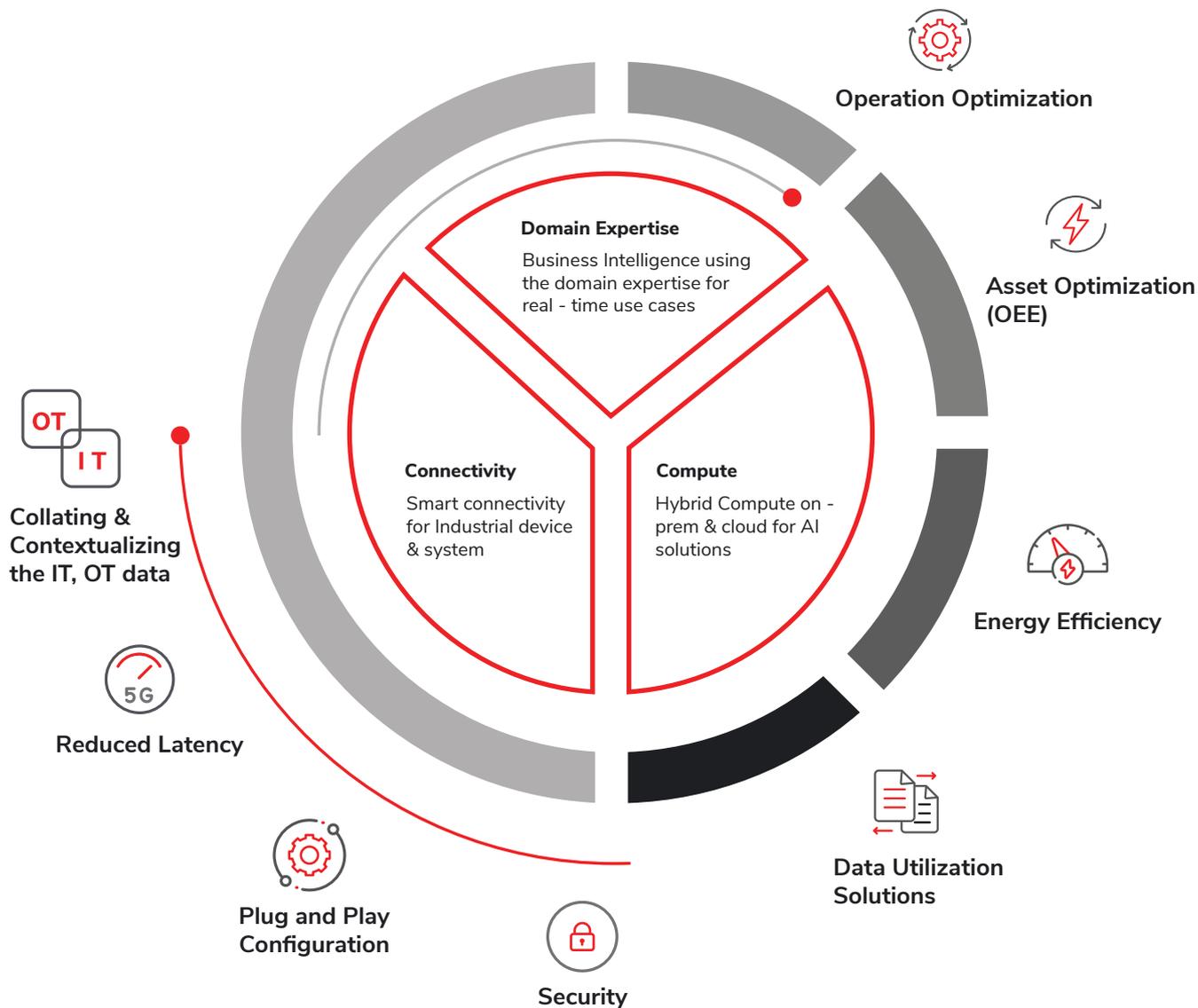
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Our 5G-empowered Edge Solutions seamlessly connect both legacy and modern devices and systems, unlocking the untapped potential of generated data. Companies can harness this data cost-effectively to drive efficient solutions, forming a robust strategy that encompasses site, edge, cloud, and data analytics .

Manoj Kumar,
Founder & CEO, NSP

Turning Data into Business Value

NSP Envision IoT Edge combines data management, domain expertise, technology capabilities, and implementation proficiency to drive Operational Optimization, enhance asset management (OEE), and enable data-driven decisions



Benefits

Our solution is designed to optimize processes and reduce overheads. With configurable and reusable building blocks for platform compatibility it requires minimal integration efforts, the advantages of adopting IoT Edge include:



Reduced Latency :
Instant data processing leads to quicker responses.



Seamless Configuration
Build your application effortlessly with drag-and-drop connectivity and component steps



Enhanced Efficiency
Optimize resource utilization and reduce operational costs.



Security
Protecting Your Network's Edge

How we do it

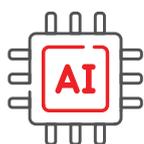
NSP Envision IoT Edge optimizes data utilization, enhancing productivity, cutting costs and promoting sustainability. This need for swift responses, local data processing and fortified storage and security, all underpinned by the speed of 5G, reinforces the allure of IoT Edge technology. These capabilities harmonize seamlessly with the core tenets of edge computing, positioning IoT Edge as a viable solution for bringing intelligence closer to the data's origin.

Unlocking the full potential of intelligent edge computing, NSP's IoT Edge offers a seamlessly integrated solution, facilitating custom logic placement precisely where it's needed—be it on the device itself or on decentralized edge nodes.

Explore boundless opportunities to empower your devices for the AIoT

Input

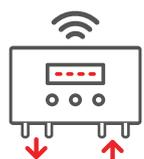
Connect your whole portfolio



Circuit/Device level
Energy Monitoring



Existing Energy Meters
(Electric, Water, Oil, Gas)



Wireless IoT sensors



Wireless Remote control
Modules

Process

Analyse in the cloud / on premise

Local real-time Alarms
and Displays

Your App or platform
(connected to our API)



Local real-time
High Res Data Feed

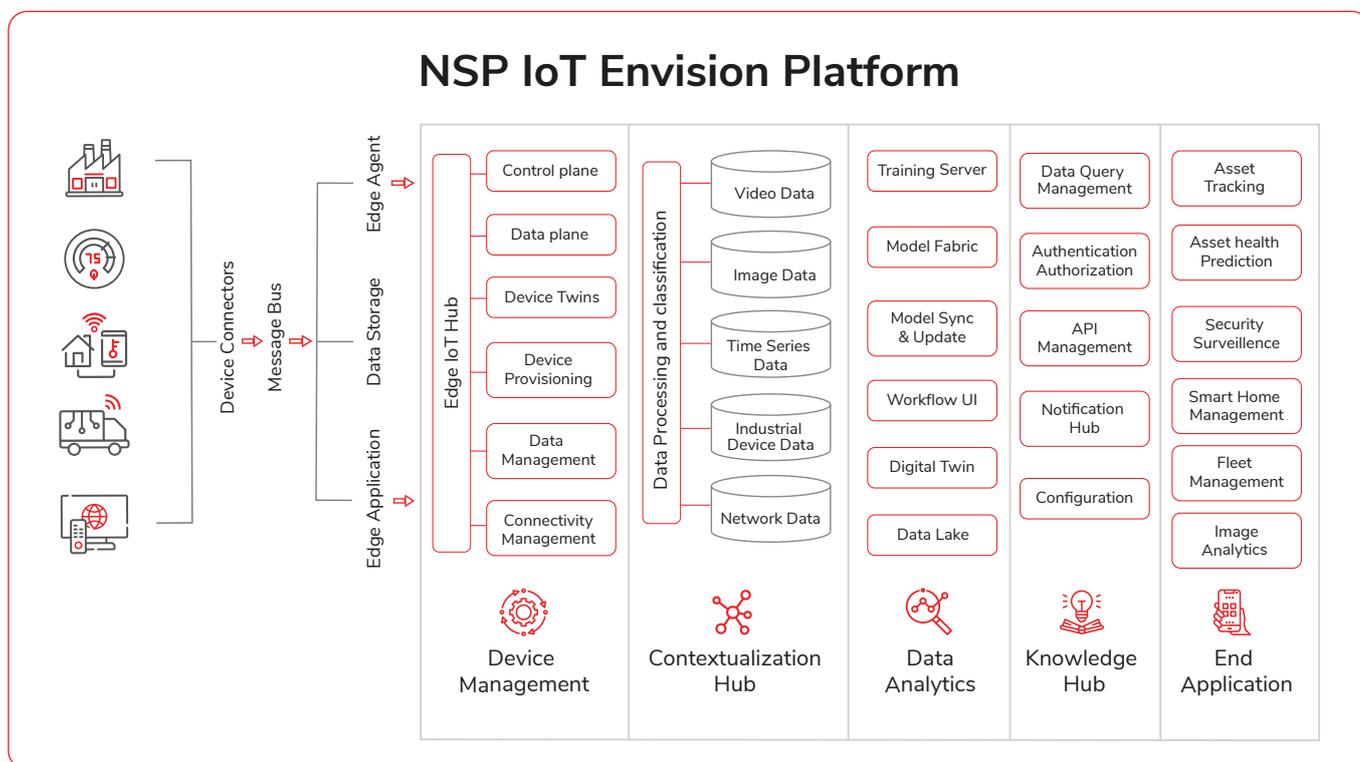
Your Devices



Architecture enriched with profound domain and technology expertise of Analytics!

NPS Envision IoT Edge Platform is highly reliable, scalable and secure. The platform is capable of building end to end value chains. Our IoT platform is very flexible and configurable to build industry specific application. Below figure shows the architecture. It comprises of IoT Edge, Device Management, Contextualization Hub, Data Analytics, Knowledge Hub and different vertical application.

NSP Envision IoT Edge : The IoT edge provides an On-premise solution for connects, compute and storage. It has ability to connect with industrial field devices and system using Open Protocols as well as using proprietary communication interface. The Edge solution is fully managed solution. It is managed by central components which can be hosted anywhere, whether it a public cloud, private cloud or On-Premise servers. There are many pre-built connectors such OPC UA , Modbus, CANbus, to connect with industrial devices and systems.



Device Management : The device management is part of Central components. It manages the IoT Edge Gateway and its application remotely. The key features of Device Management components are Edge Gateway provisioning, Remote Application deployment, Remote Application configuration, Remote development of AI/ML components, Dashboard, Notification and reporting services deployment.

Data Analytics Layer : Data Analytics and processing is key part of digital application. Our NPS Envision platform provides an intelligent and seamless platform to develop models, Digital Twins applications, model training server. The trainer model can be saved and remotely published to any of the edge instance. This helps us to build On Premise AI/ML applications on the edge.

Contextualization Hub : The Contextualization Hub normalized the device and system data semantically that are coming from industrial devices and system connected to the Edge. The Edge is connected to various kinds of devices and system. The data format of each device and system are different, however semantically same or co-related. The Contextualization Hub semantically organises the data based on relevance with the Applications.

Knowledge Hub : The Knowledge Hub layer provides different services to query the device data, creating notification and reporting workflow customized for end application as different required specific data for their applications.

Vertical Applications : Our platform provides pre-built configurable end user applications for different verticals.

Specification :

System Core		
	Processor	ARM A53 (Quad Core 2.0GHz)
	Memory	4GB LPDDR4
I/O Ports	Storage	eMMC: Onboard 32 GB
	Ethernet	1x 10/100M Ethernet
	SD Card	1x external T-flash socket support SDHC
	SIM Card	5G 1x external SIM socket
	GPU	8GB
	USB	1x USB2.0
	User LEDs	6x user programmable LEDs
	User Buttons	2x user programmable buttons
	CAN	
	Serial Port	2x software configurable RS-232/ 422/ 485
	Communication protocol	Modbus TCP, MQTT, OPC UA, TCP/IP
	Antenna Opening	1x antenna opening for Wi-Fi and 3G/LTE/5G
Power	Power Rating	9V~36V DC, 2Pin Terminal Block
	Adapter	12V 36W (Optional)
	Control Button	1 x Power Button 1 x Reset Button
Operating System	Linux Yocto 5.10.104 with QT 5.15 (Optional) Linux Ubuntu (Optional)	
Environmental	Operating Humidity	-25°C ~ 70°C *
	Storage Temperature	'15°C to 70°C
	Operating Temperature	0°C to 55°C
	Vibration	5Grms
	Certification	CE, FCC Microsoft Azure Certified for IoT
	IP rating	IP30
Accessory	Terminal Block 2 pin to 2.5Ø Female Adapter Cable	
	Quick Start Guide	
	Open Wire Cable	
	WLAN External Antenna*2 (For WLAN sku)	
	WWAN External Antenna*2 (For WWAN sku)	

Key Applications :

- **IoT Energy Management** : Energy saving
- **Manufacturing** : Optimize production processes and minimize downtime.
- **Smart Cities** : Enhance city infrastructure for improved living standards.
- **Healthcare** : Enable remote patient monitoring and healthcare services.
- **Logistics** : Streamline supply chain operations and enhance tracking.
- **Agriculture** : Precision farming for increased crop yields and resource efficiency.



Key Features :

Eniscope hybrid provides the on-board metering , data acquisition, edge computing and internet gateway capabilities that sit at the heart of this ecosystem



- **Seamless Integration** : Effortlessly integrate IoT devices into your operations.
- **Edge Computing** : Process data where it's generated for faster response times.
- **Custom Logic** : Place custom logic precisely where it's needed, enhancing decision-making
- **5G Connectivity** : Harness the speed and reliability of 5G for lightning-fast data transmission.
- **Security** : Robust security measures ensure your data is protected at all times.

Why NSP ? When you choose NSP you get

Unified IT and Operational Technology Expertise: NSP harnesses its unique background as both an Automation and Software Technology services provider, with extensive experience in industrial automation. This equips us to have a deep understanding of both the IT and OT domains, offering the knowledge and hands-on experience needed to deliver truly effective IoT solutions

Simplified Complex Project Management: As seasoned IoT solution integrators, we excel in managing intricate projects. We adeptly handle multiple data sources, guaranteeing the seamless integration of our IoT platform with your backend systems, resulting in a tailored and fully functional solution

Comprehensive Support: NSP offers complete life-cycle management, bridging resource and skills gaps, allowing you to concentrate on areas where your IoT solution can bring the most value to your business. Through our managed IoT solutions, we empower your business while providing you with the assurance that you are in capable hands



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