



**SMART
CITY • 5G •**

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#APRATOSIFA

Digital services and solutions for fleet management



Who we are, Where we are?

Over 30 years experience

Year of Establishment	1984
Headquarters	Prato, Italy
Offices	1.200 m ²
Manufacturing Area	4.600 m ²
Group HC	200 Permanent Staff
Certifications	ISO 9001/ ISO 14001 / OHSAS 18001
Localizations	9 Countries
Website	www.sse.cc

ALGERIA - SSE EL-DJAZAIR
www.ssedz.com

ANGOLA - SSE & OILFLOW
www.sse.com

BRAZIL - SSE DO BRASIL
www.ssebrasil.com.br

ITALY - SSE
www.sse.cc

IRAN - SSE IRAN BRANCH
www.sse.cc

IRAQ - SSE IRAQI BRANCH
www.sse.cc

JAPAN - SSE
www.sse.cc

KAZAKHSTAN – ZEINET&SSE
www.zeinetsse.com

U.A.E. - SSE ME DMCC
www.sse.cc

GLOBAL MINDSET & LOCAL OPERATION



What we do

Industries Served

- Oil & Gas, Pipeline, Petrochemical, Refinery and Power Generation

Applications

- New and Mature Fleets of Rotating Machines and Plants

Products & Services

- EPCC of Integrated Engineered Solutions for Rotating Machines
- EPCC of DCS, F&G, ESD and SCADA for Process Plants
- **IIoT Solutions & Digital Services**
- Consultative services for Rotating Equipment & Plants
- Field Service Activities
- Training for technical competences
- After sales assistance and services

Our vision & mission

Vision

- **To be a Leading Digital Industrial Provider of Turn-Key Solutions with a Global Mindset combined with Localized Operation.**

Mission

- Provide Solutions for New Projects and Revamping, Upgrading & Optimization of mature fleets of Rotating Machines and Plants in the Oil&Gas and Powergen Industries.
- **Grow in the Industrial Internet of Things, Cloud Services and Augmented Reality markets.**
- Expand presence in strategic Countries and develop local expertise maximizing local content.



IIoT Solutions & Digital Services

Sensor-to-Cloud Engineered Solutions

Services:

- Survey for Digital Assessment
- Digitization through retrofitting of equipment with new sensor technology
- One-stop Solutions from Plants to Cloud including data acquisition, processing connectivity, big data analytics, machine learning algorithms and visualization
- Cyber Security Solutions in compliance with the IEC 62443
- Augmented reality for troubleshooting support

Benefits:

- Quickly acquisition of valuable data
- Easy installation and extensibility via Plug&Play
- Control and optimization of installed bases
- Instant problem detection and diagnostic
- Reduced maintenance costs
- Improvement of production and service quality
- Defense in depth against industrial security threats
- Enable predictive maintenance

Cyber Security Services

SCADA/ICS Security Cyber Upgrade

Corporate Network Assessment focusing on segregation and isolation
SCADA / ICS Network Assessment (in compliance with the IEC 62443)

SCADA/ICS Security Assessment

Testing SCADA and ICS network systems simulating network attacks and checking devices configuration

Network Intrusion Detection and Prevention Systems

Monitor and block malicious activity and attacks providing traffic logs

Remote Access Security

Data-diode (one-way directional), VPN, intrusion prevention and read-only access based on different users level authentication

Patch Update Service

Periodic OS and antivirus update for HMI and Historian Server

Network components upgrade

HMI / Historian / Switch upgrade with up to date technologies

IIoT TURN-KEY SOLUTIONS



Our Main Customers



Customers



2010: CONDITION MONITORING

CUSTOMER'S NEEDS

- Predictive maintenance
- Remote diagnostic

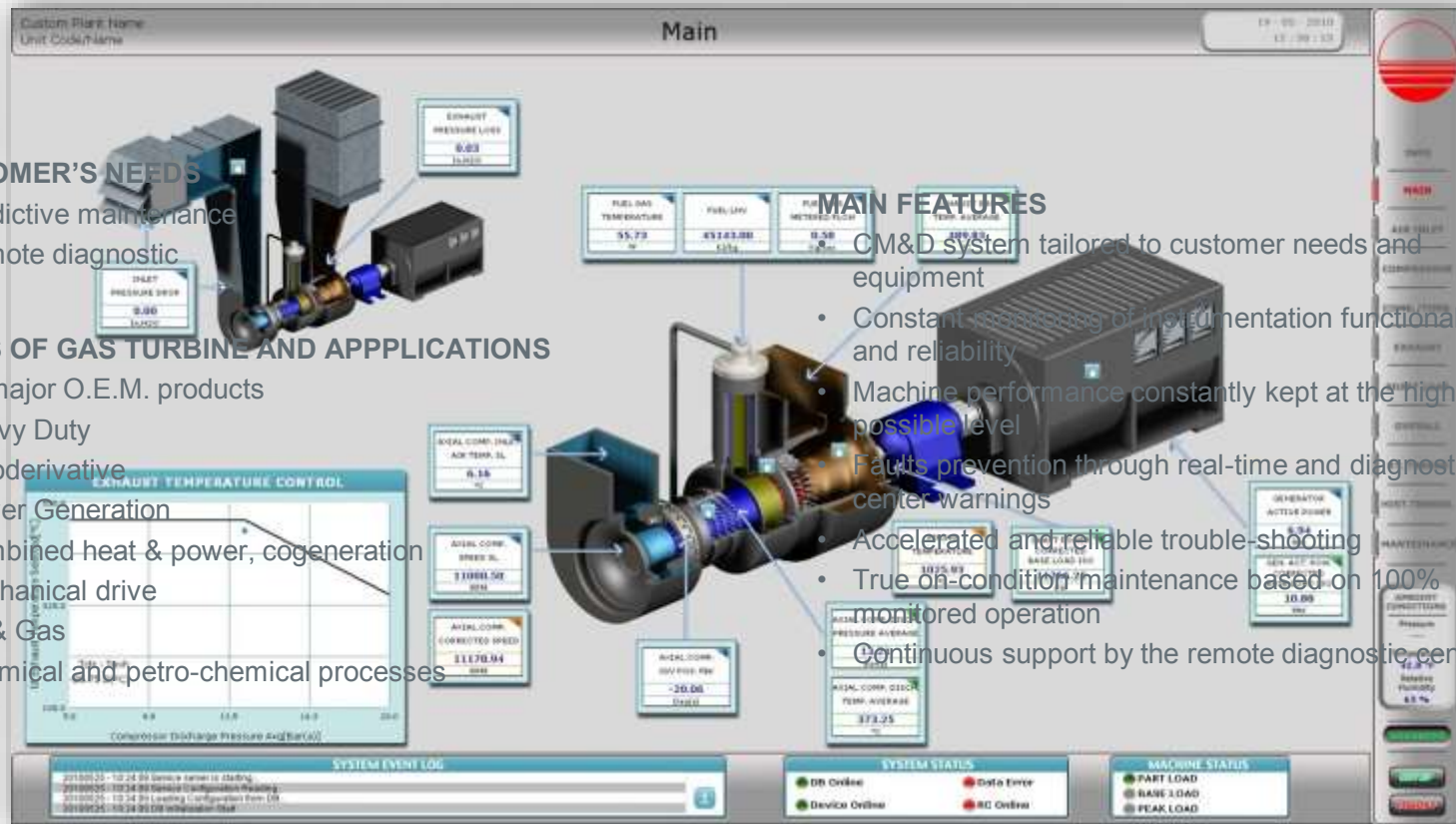
TYPES OF GAS TURBINE AND APPLICATIONS

- All major O.E.M. products
- Heavy Duty
- Aeroderivative
- Power Generation
- Combined heat & power, cogeneration
- Mechanical drive
- Oil & Gas
- Chemical and petro-chemical processes

MAIN FEATURES

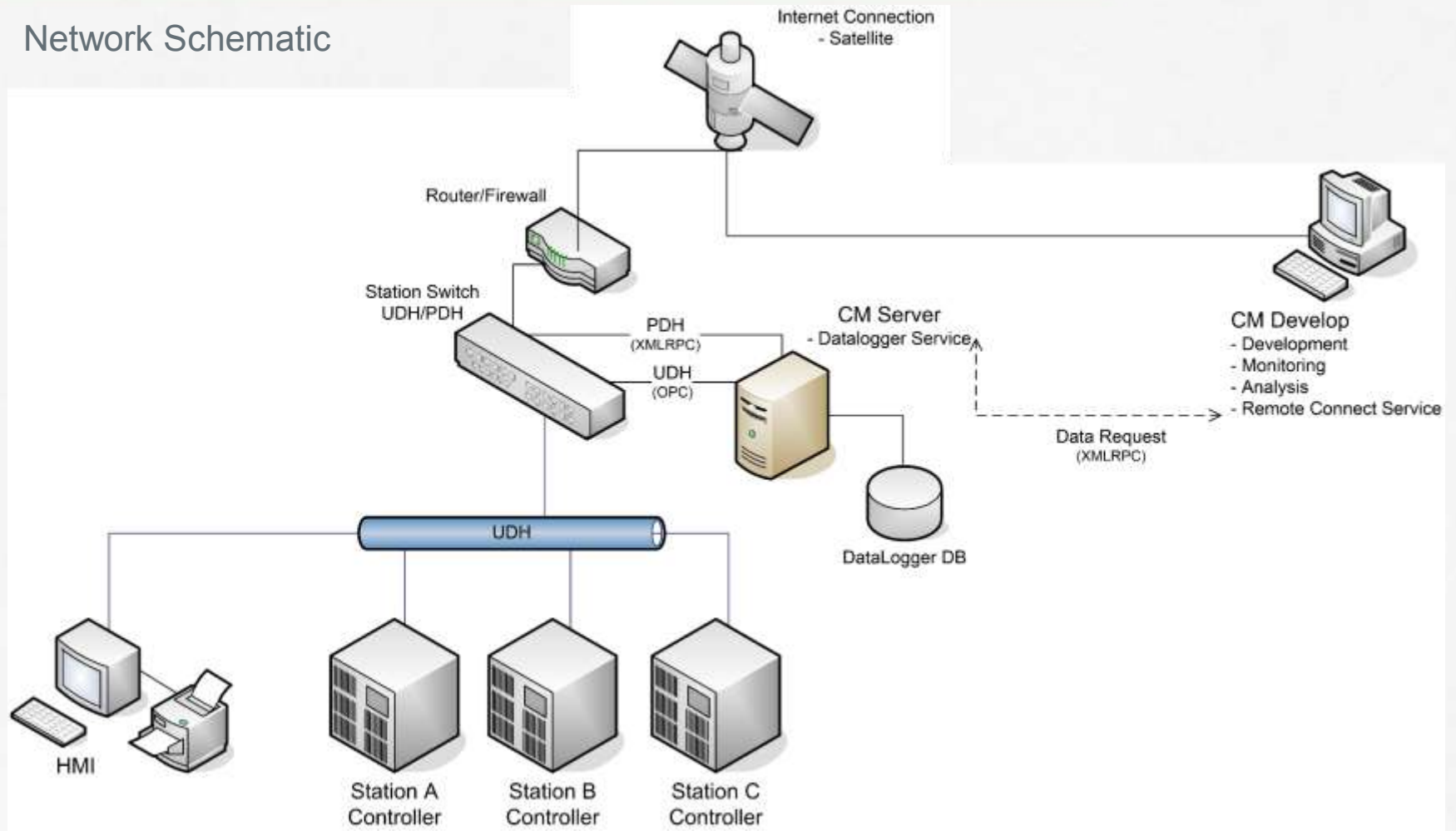
CM&D system tailored to customer needs and equipment

- Constant monitoring of instrumentation functionality and reliability
- Machine performance constantly kept at the highest possible level
- Faults prevention through real-time and diagnostic center warnings
- Accelerated and reliable trouble-shooting
- True on-condition maintenance based on 100% monitored operation
- Continuous support by the remote diagnostic center



2010: CONDITION MONITORING

Network Schematic



2016: PREDIX PORTING



- Porting on Predix cloud-based Platform to be able to bind and analyze data as per Predix Analytics technology and Digital Twin concept.
- To replace the existing local data elaboration and visualization with Cloud Computing and Front-ends apps for Visualization.
- Analytics algorithms that process machine data to provide a framework for developing and embedding advanced analyses in business operations.

Embedded or stand-alone Field Agent to acquire and elaborate (SSE proprietary libraries) data from the Edge



Cloud Database (Timeseries) and Analytics (SSE proprietary libraries)

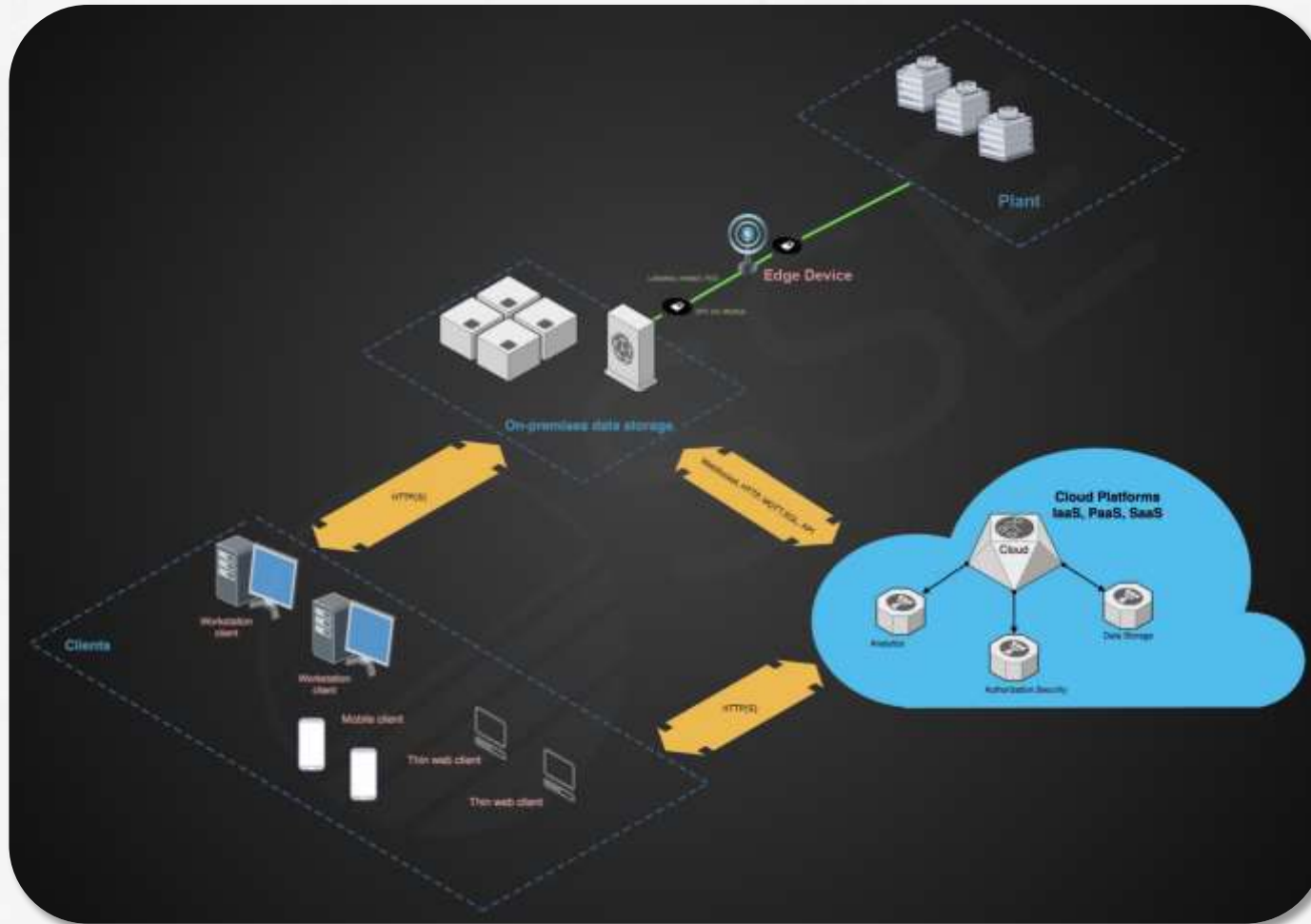


Front-end APP / Dashboard
Mobile APP

2017 Predix Condition Monitoring test with Modbus and OPC UA protocols data acquisition (others standard or custom protocols adapter available)



2018-19: SSE IIoT SOLUTION



2018-19: IIoT4.WATER + 5G EXPERIMENTATION

Who needs it?

Water treatment plants

What we do?

- Automate a process
- Predictive maintenance
- Improve the efficiency
- Avoid bypass
- Data for top management

How?

- Innovative sensor
- Machine Learning
- Digital Twins
- Cloud
- 5G connection



Innovative Sensor
+
Real-Time Plant Data
(OPC UA, Modbus, etc.)

Edge Device

5G Modem

Cloud



Licenza poetica



“Cavaliere rosso” Anno:1913

Espressione oggi più che mai attuale. La vita moderna dominata dai miti della **velocità** e del **progresso**



Città di Prato

www.cittadiprato.it



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DI FIRENZE