

PROPAT
INTEGRATED PROCESS CONTROL

Smart Sensor Suite and Protocol-agnostic Interface Platform

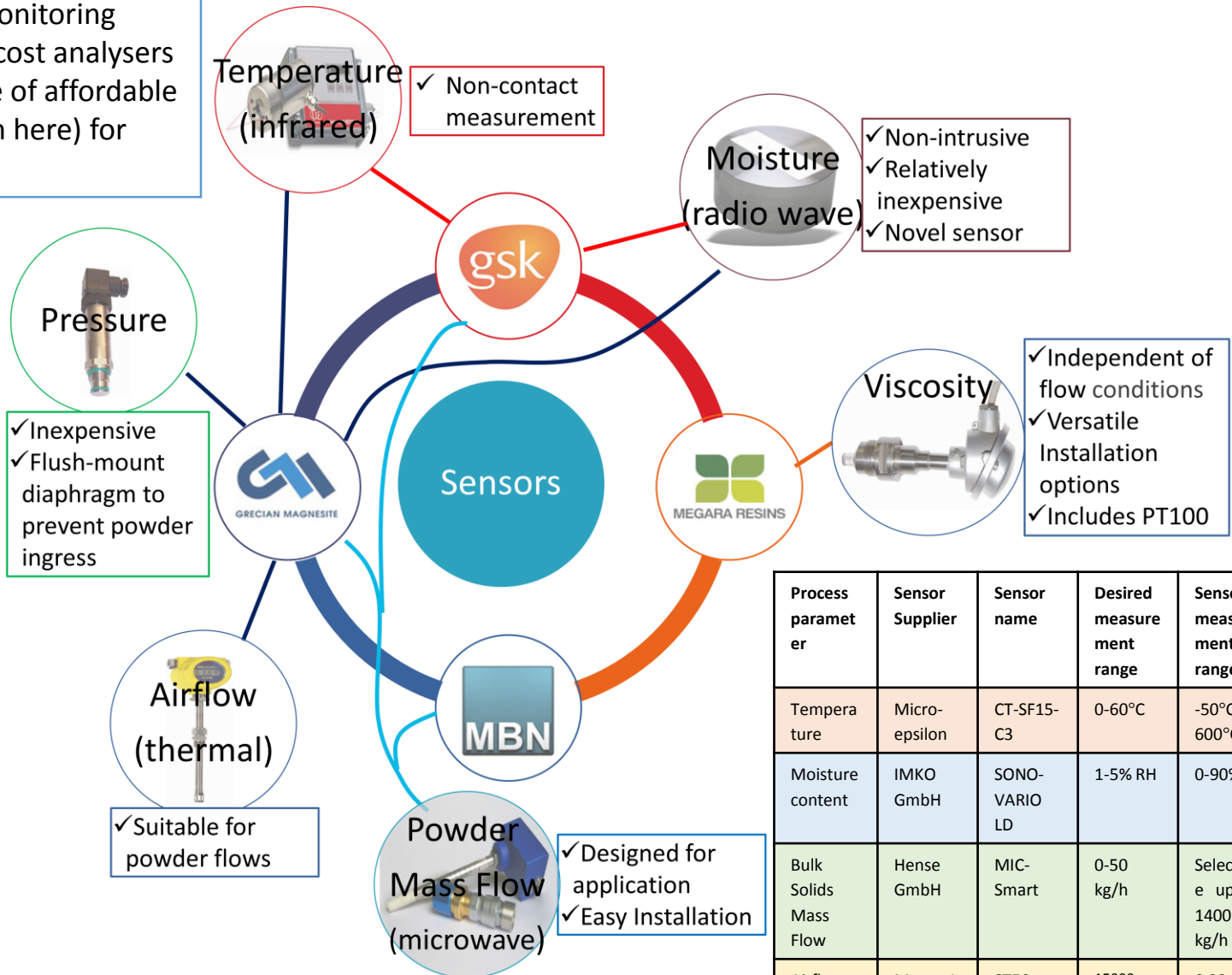


INSTITUTE OF TECHNOLOGY
TRALEE
INSTITIÚD TEICNEOLAÍOCHTA TRÁ LÍ

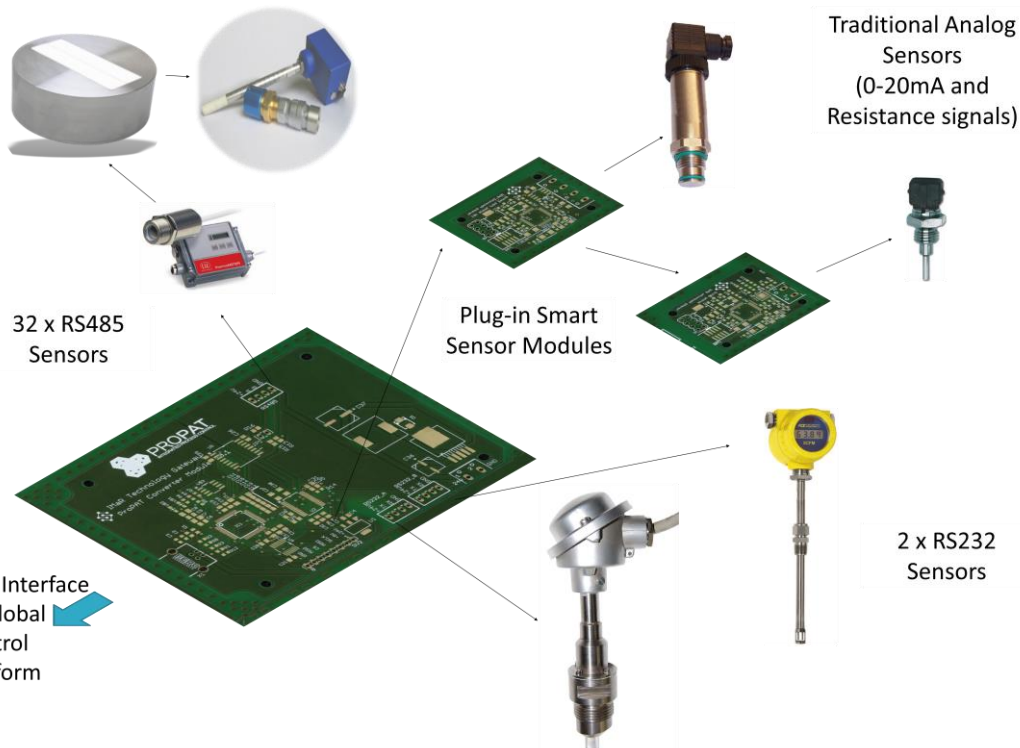


IMaR
Technology Gateway
INTELLIGENT MECHATRONICS AND RFID

ProPAT aims provide an integrated process control approach, embedding a novel monitoring system based on low cost analysers combined with a suite of affordable smart sensors (shown here) for monitoring in real time the critical control parameters of key processes in the minerals, ceramics, non-ferrous metals, and chemical process industries. The data from the sensors and analysers will be seamlessly managed via a versatile Global Control System Platform that will acquire, process and mine the data for closed loop control of the process or for decision support.



Process parameter	Sensor Supplier	Sensor name	Desired measurement range	Sensor measurement range	Sensor Accuracy
Temperature	Micro-epsilon	CT-SF15-C3	0-60°C	-50°C to 600°C	1% or 1°C
Moisture content	IMKO GmbH	SONO-VARIO LD	1-5% RH	0-90%	0.1%
Bulk Solids Mass Flow	Hense GmbH	MIC-Smart	0-50 kg/h	Selectable up to 1400 kg/h	3-5%
Airflow	Measurl T	ST50	15000-25000 m³/h	0.23 to 122 m/s	0.5% FS
Pressure	Variohm EuroSensor	CIT-F-2-V-A-F-00025	-5 to -35 mBar	0 to -250 mBar	0.3%
Viscosity	Flucon GmbH	QVis01/0	0-30 Poise	0-100 Poise	1%



A protocol-agnostic converter unit was designed to allow the sensors for each end-user case study to be integrated through a common, single, multifunctional module that converts the sensor outputs to a standard protocol to interface with the ProPAT platform.