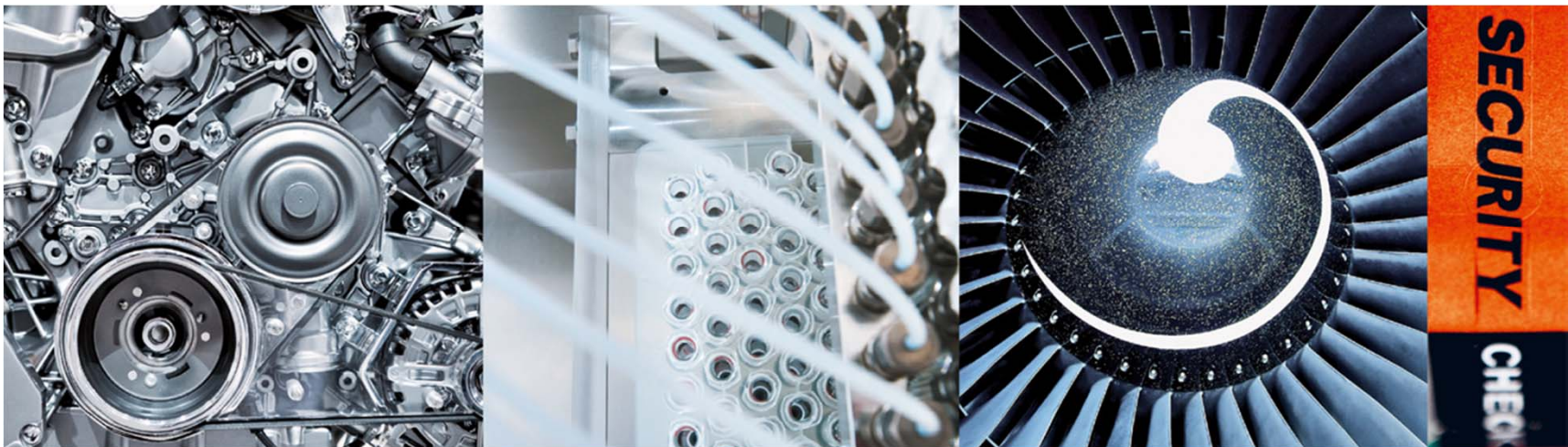


Industrial X-Ray

iVario — Forward thinking functionality in high voltage generators
incredibly powerful, unbelievably intelligent



ASNT Innovation Forum – Nashville, TN

Noah Fredette – Senior Sales and Business Development Manager

THE COMET GROUP



COMET, AG is a forward thinking 65 year-old Swiss company and leading supplier of advanced system and component solutions based on x-ray, electron beam, and RF technologies

Provider of X-ray source technology supporting customer screening, inspection, & material processing requirements



Worldwide representation, with global operations supporting OEMs on a global basis in the US, Europe, and China

Strategy underpinned by product innovation, staff expertise and excellent customer experiences



iXRS – Uniquely Integrated Module Solution



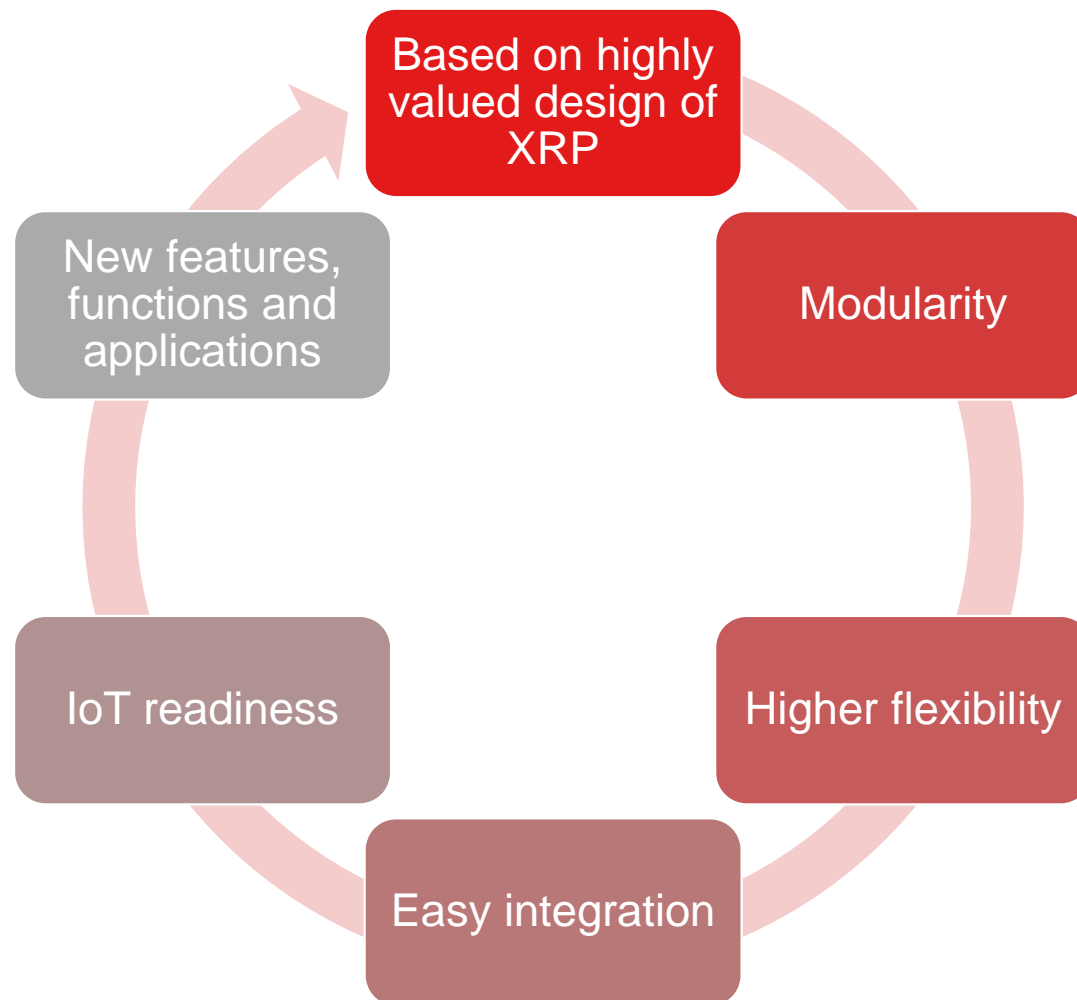
Tailored iXRS Solution- iVario generator

COMET is the only manufacturer of a complete x-ray system with seamless integration of the cooler, high voltage cables, self-manufactured x-ray tube and a flexible, self-configurable design with the tube in mind.



Our base for development – knowledge of all components

iVario – fundamentals of future development



Targeted Applications with iVario



Non-Destructive Testing



Security



Sorting



Irradiation



Thickness Gauging



Ebeam

iVario: Family of High Voltage Generators



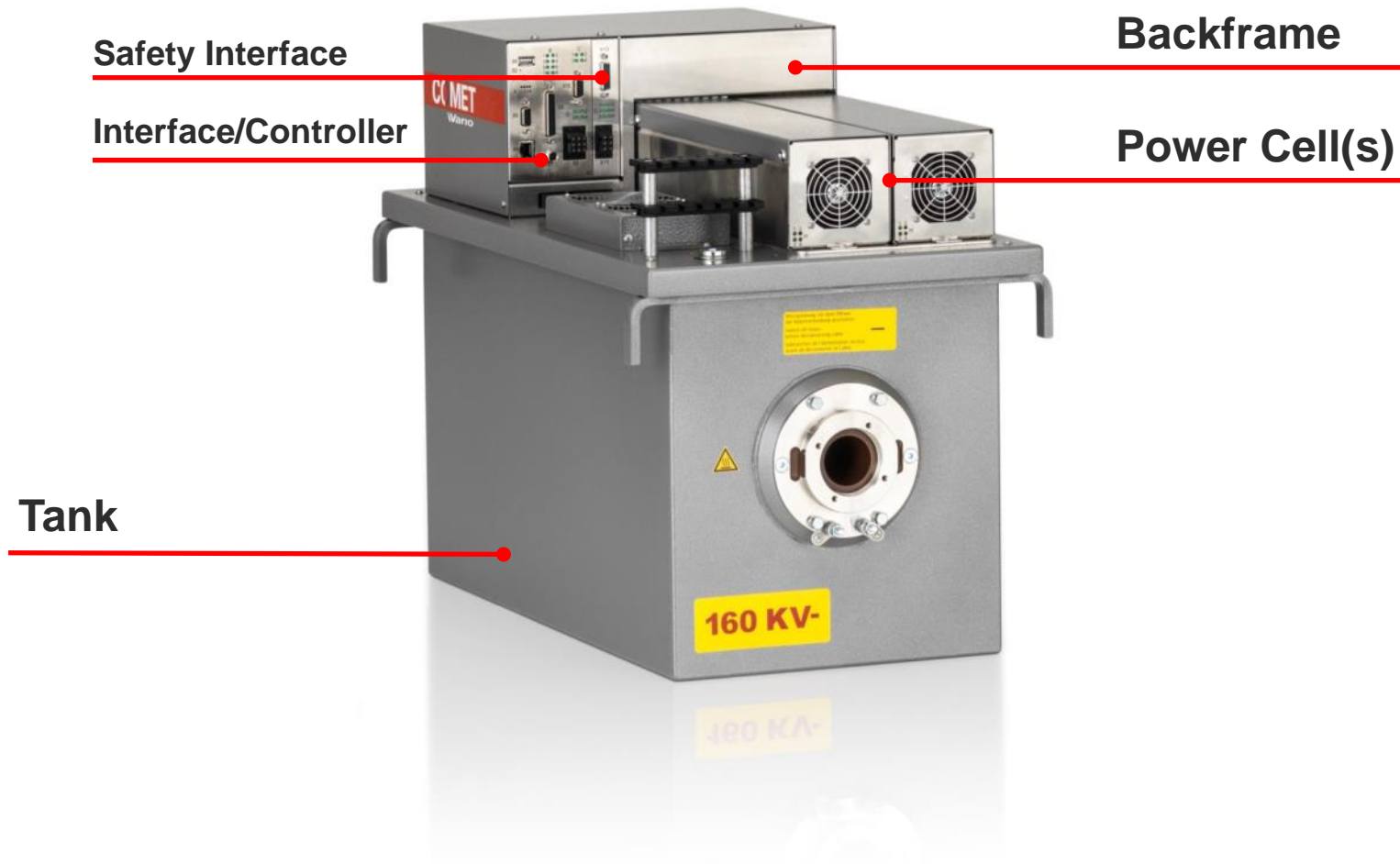
iVario-160/x.xx

iVario-225/x.xx

iVario-320/4.5

iVario-450/4.5

Introducing the modularity of iVario Generator



iVario Generators have Modular Construction

Introducing new iVario Generator

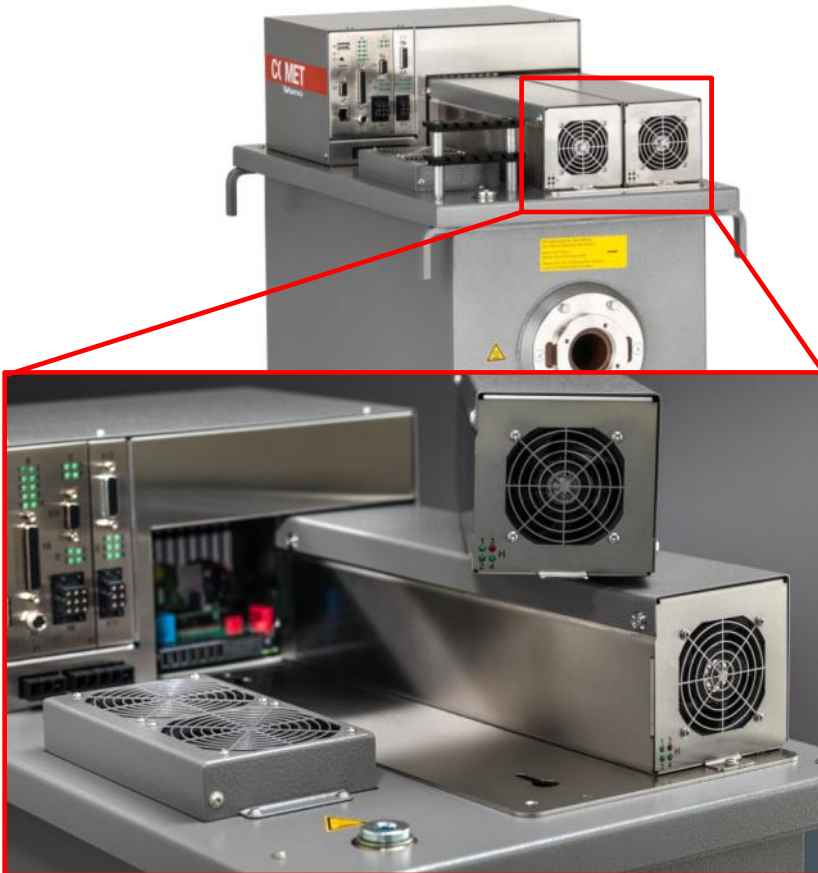
Interface Controller: Central intelligence of the generator



- External communication
- Master for all data management
- MAINS control
- All signal monitoring
- Interface board (not pictured)

Introducing new iVario Generator

Modular Power Cell



- Easy replacement and upgrade
- Power range: full power available at low levels of kV
- Two power cells for highest stability at all working points
- Power Cell Efficiency > 98%
- High power density

Introducing new iVario Generator

Tank: highly reliable design



- Highly reputable performance
- Exceptionally reliable architecture
- Higher frequency
- Increased efficiency

Generator Options ... bridging the gap

Flexible Integration & Backwards Compatibility

IP 54 Protection Cover



I/O Terminal



RS 232 Protocol

Touchscreen Controller

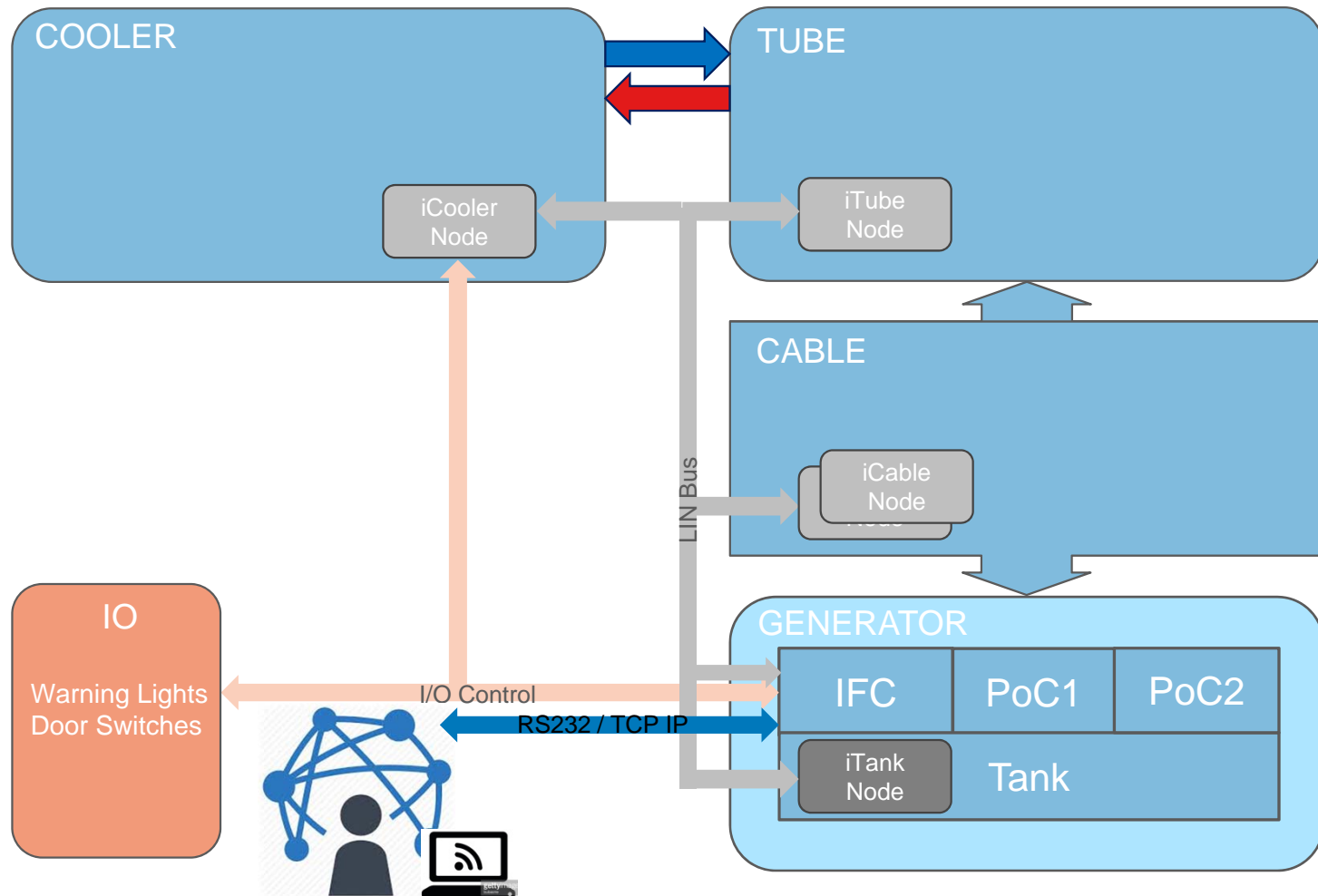


Cooler Interface



iVario: Hardware – Software Platform

DIFFERENT COMMUNICATION LAYERS



iVario Environment



Ethernet



Control software

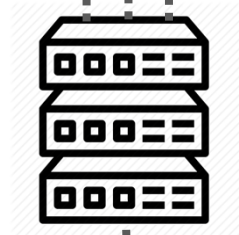
Control tool



Controller



Customer software



Service tool



WebUI



Generator designed to optimize tube operation

...designed with the tube in Mind

- **Power curves** (ramp-up and ramp-down) optimized for **each COMET tube**
- **Accurate filament control**
- **Dynamic & intelligent arc-handling**
- **Visualized tube diagrams** with power levels allow to actively manage the tube lifetime
- Automated warm-up



Service & Support to the highest extent



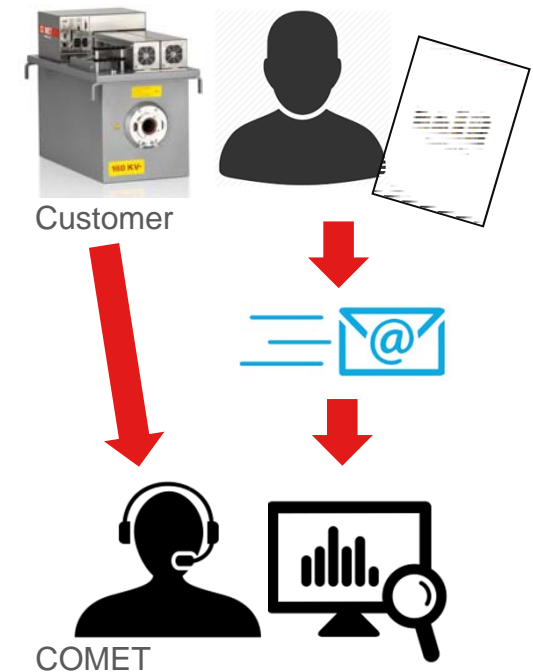
GENERATOR

SOFTWARE

- Fail- safe software upgrades
- Storage of the event logs and history
- Digital nameplate
- Report generation
- Remote support and diagnostics

HARDWARE

- Quick and Easy exchange of the components
- LEDs at the interface
- Simplified spare parts management



Flexibility

- **Power:** Single or Three-Phase
- **Fully configurable inputs, outputs and warning lights:** easy adaptation and configuration
- **Control:** controller, computer software or customer software
- **Options:** optional elements for the best possible integration
- **Software flexibility:** new features as needed
- **Modularity:** price – performance optimization
- **Platform design:** base for future development



Take away...

- **Modular and Flexible** → configure what you need and how you need it
- **Designed to optimize tube operation** → the best possible performance
- **Extended serviceability** → designed for the highest uptime
- **Industry 4.0 Ready** → developed to be forward thinking and ready for a more connected workplace



DISTRIBUÉ PAR / DISTRIBUTED BY:



QUEBEC
164, St-Jean-Baptiste
Mercier, QC J6R 2C2
T : (450) 691-9090

ONTARIO
275 Sheldon Drive, Unit 3
Cambridge, ON N1T 1A3
T : (519) 894-9069

www.qnde.ca

Thank you

