

The image is a split-screen composition. The left half shows a serene natural landscape with lush green mountains and a calm lake reflecting the sky and trees. The right half shows a vibrant city skyline at night, with numerous skyscrapers illuminated and their lights reflecting on the water. The transition between the two images is seamless, highlighting the contrast between nature and urban development.

DISTRIBUTION SOLUTIONS

Digital, smart, sustainable. The next chapter of GIS

ZX Digital - The smarter GIS solution

Medium-voltage primary gas-insulated switchgear (GIS)

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Why ZX Digital?

Digital GIS definition & value add

ZX Digital – The smarter GIS from ABB

At ABB, we believe in a world in which nature and technology go hand in hand. A world in which powering your operations also means powering positive change – for your business and our planet. We strive to create products and solutions that make a difference.

Be digital, smart and sustainable.

That's the thinking behind our philosophy for medium-voltage, Primary Gas Insulated-Switchgear (GIS):

ZX Digital.



Digital definition

Definition of ABB MV Digital GIS

Two pillars to make a GIS digital

ABB's Digital solutions make our proven GIS smarter, safer and more efficient



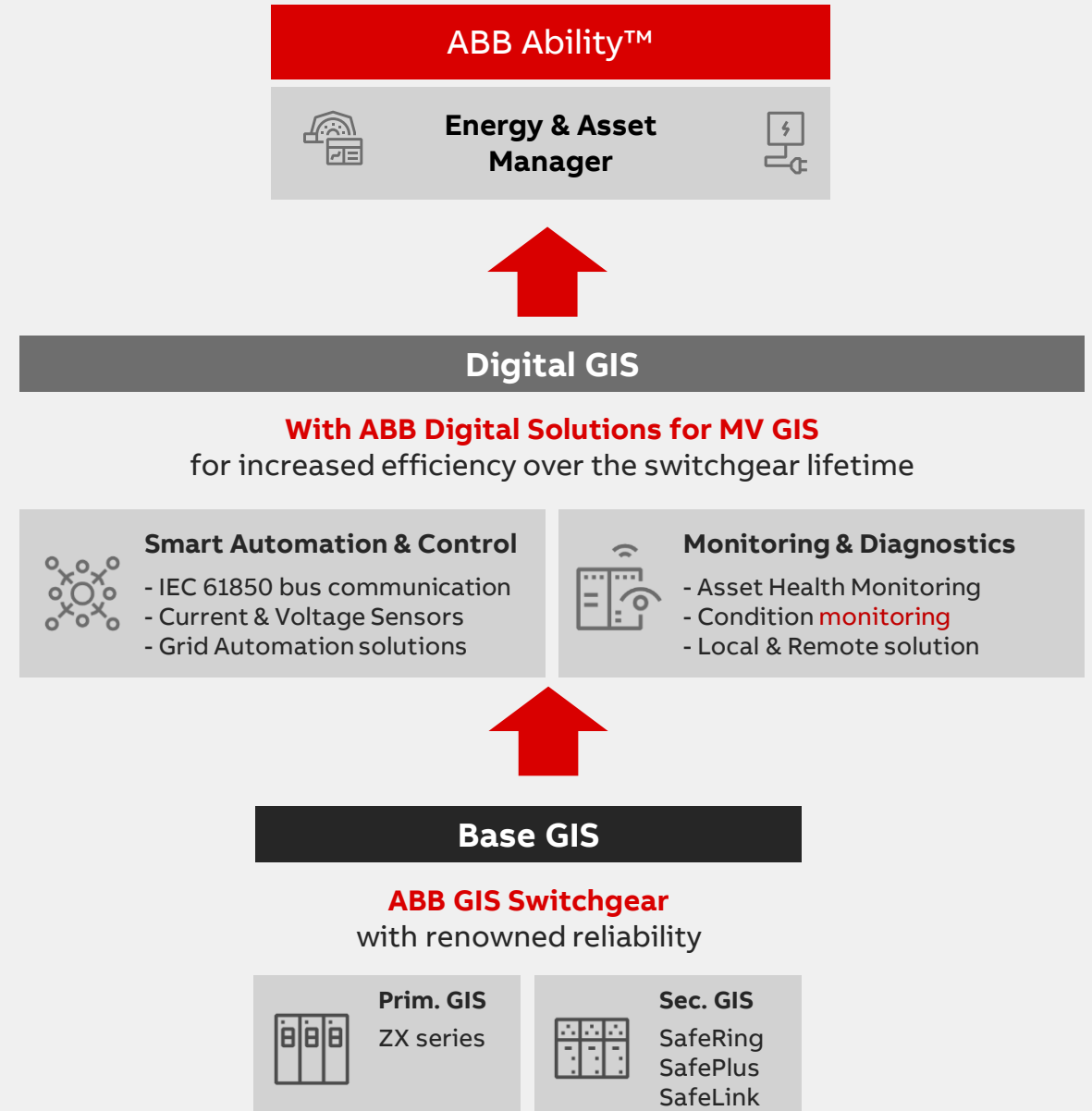
Smart Automation & Control

Enabling you to efficiently act and quickly react. Use automated solutions and latest technologies for safe and efficient operation & increased availability of power supply.



Monitoring & Diagnostics (M&D)

For peace-of-mind of GIS users: Be sure that switchgear is in good condition for highest reliability. For a lower total cost of ownership: Do maintenance when really needed.



Make your GIS smarter

M&D Features

Pillar 1: Smart Automation & Control

- 1** IEC 61850 Bus communication
- 2** Current Sensors
- 3** Voltage Sensors (in socket) or
Voltage Sensors (on cable plug)

Pillar 2: Monitoring & Diagnostics

Currently available:

- 1** Remote gas density monitoring
- 2** Cable connection Temperature
- 3** VI Electrical Life estimation
- 4** CB mechanism (Basic: Hall sensors)
- 5** Env. Temp & Humidity (LVC)

Under development:

- 5** Environment (switchgear building)
- 6** CB mechanism (Adv.: Angle sensors)
- 7** 3PS Monitoring (Electrical)

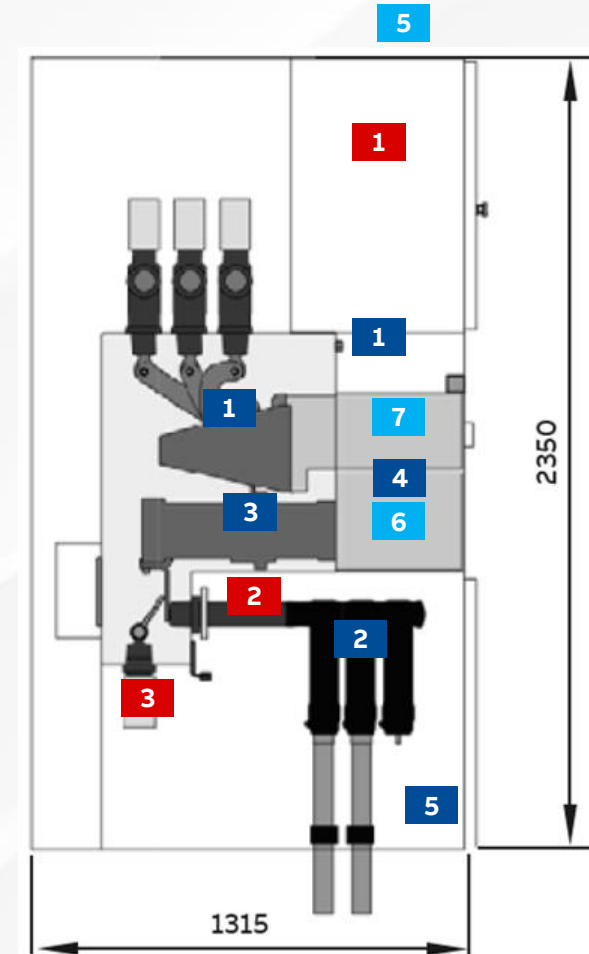


ABB offering for digital medium-voltage switchgear

GIS for primary power distribution

PrimeGear ZX0

- Up to 24kV, 1250A, 25kA
- With solid-insulated busbar
- SF6-free version available

ZX0.2

- Up to 36kV, 2500A, 31.5kA
- With solid insulated busbar
- Front access enables space saving wall-mounted installation



PrimeGear ZX0

up to 24kV, 1250A, 25kA



ZX0.2

up to 36kV, 2500A, 31.5kA



ZX2/ZX1.2

up to 36kV, 2500A, 40kA

**Primary GIS
ZX Digital**



ZX2

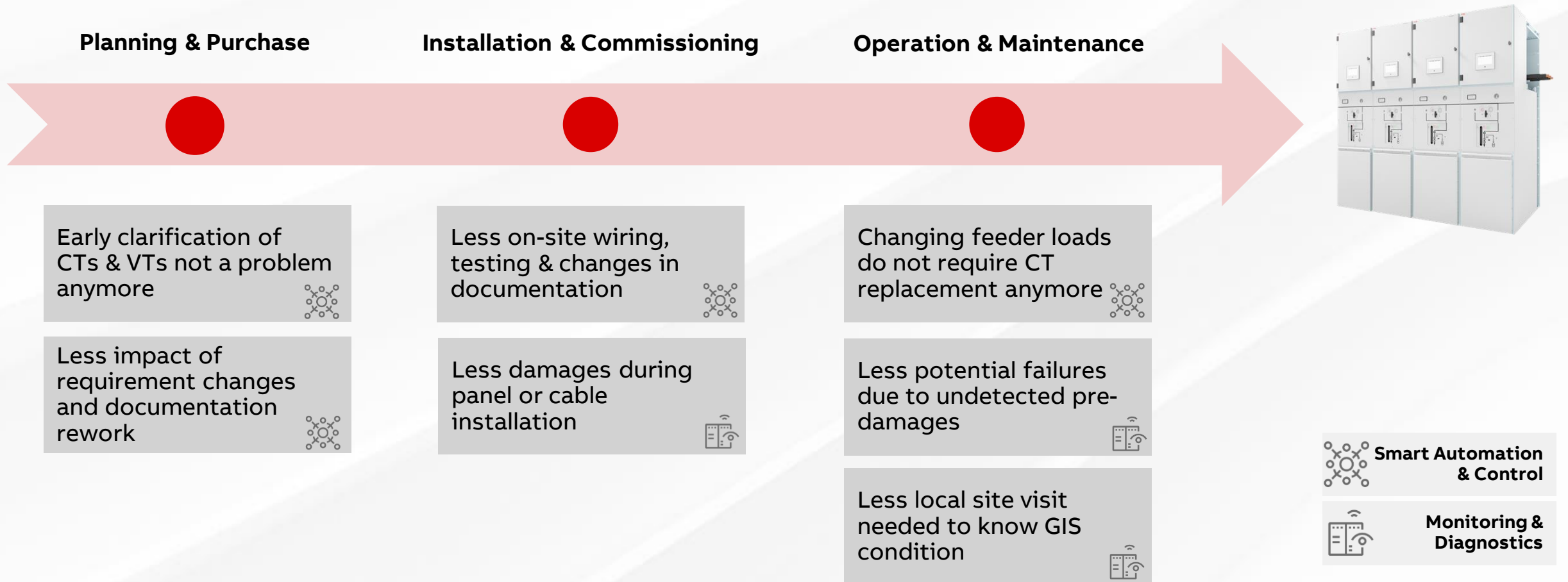
- Up to 36kV, 2500A, 40 kA*
- With gas-insulated busbar
- Single & double busbar with same space-saving footprint

ZX1.2

- Up to 36kV, 2500A, 31.5 kA
- With gas-insulated busbar
- Single & double busbar with same space-saving footprint

Digital GIS

For more value along the switchgear lifecycle



**Our intelligent digital solutions
will make your business smarter**

01.

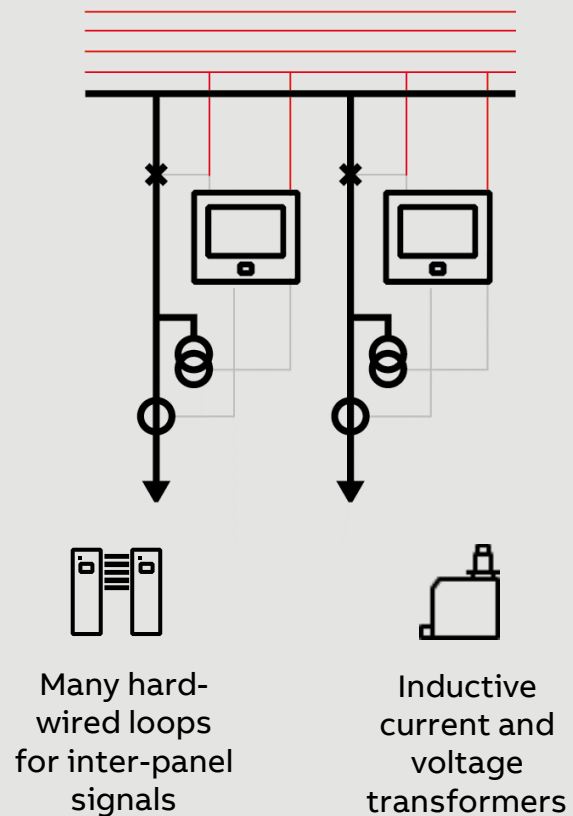
Smart automation & control

**Latest technologies for safe
and efficient operation and simple
processes:**

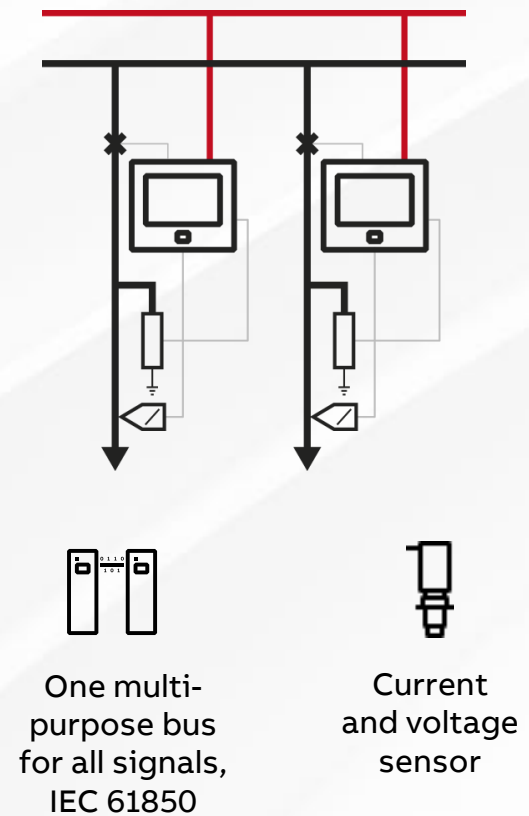
- IEC 61850 bus communication
- Current and voltage sensors
- Grid automation solutions
- Local solutions or convenient access from remote locations

How is GIS changing to make your switchgear smarter?

Conventional solution



Digital solution



Make your GIS smarter

ZX – Digital and Smart Features and Benefits

One multi-purpose bus for all signals (IEC 61850)

Current and voltage sensors instead of conventional

Multiple options for M&D

More Safety

- Low energy signals and self supervision on IEC 61850 bus reduce probability of failures and allow an early failure detection

Lower Operational Cost

- Easier planning and change handling, reduced outage times/costs

Energy efficient and climate friendly

- Lower electrical losses with sensor technology.
- Easy data access, local or remote

Reduced Planning Effort

- No early clarification of CT/VT values, less limitation in I/Os

More Flexibility

- No exchange of instrument transformers needed - sensors can just be reconfigured.
- Modifications can often be implemented without change of LVC wiring



**Our intelligent digital solutions
will make your business smarter**

02.

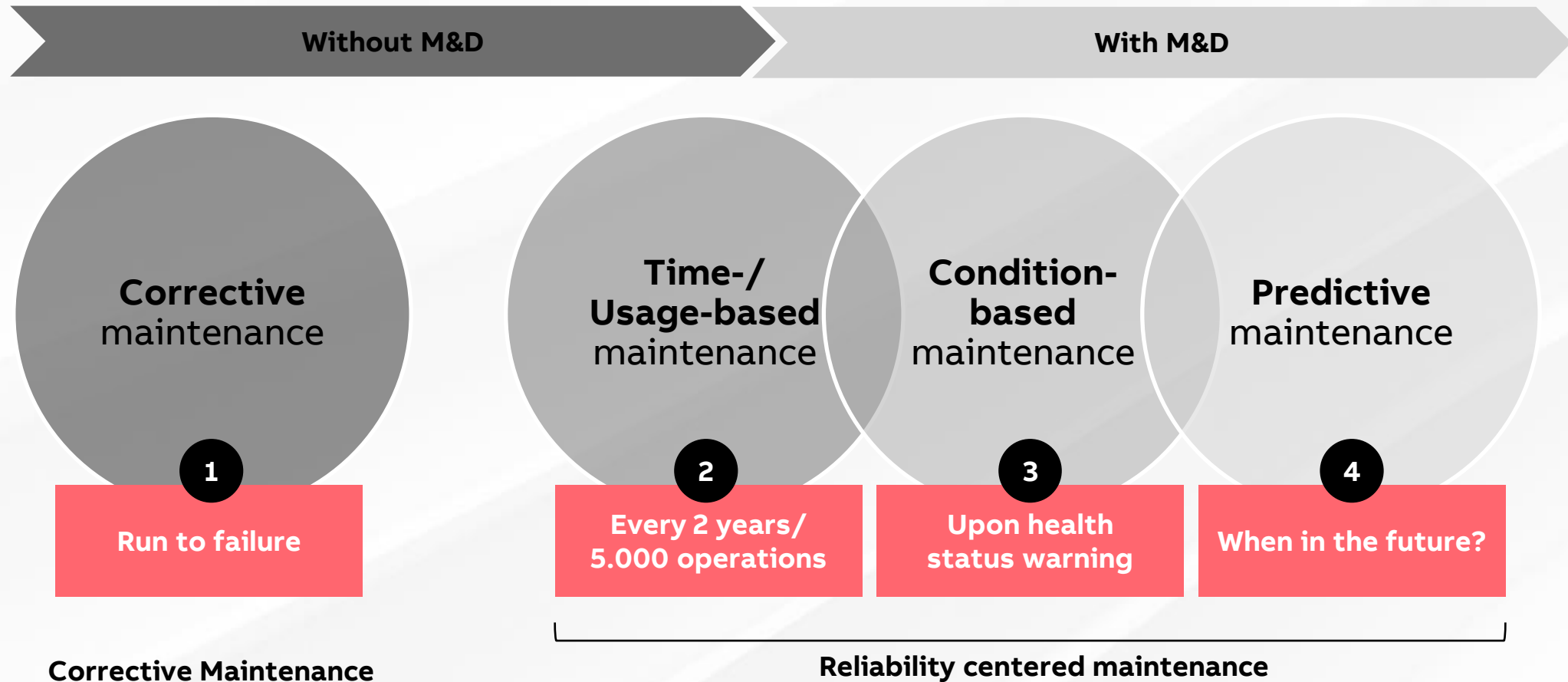
Monitoring and diagnostics

**Asset health monitoring for peace of
mind and lower operational cost:**

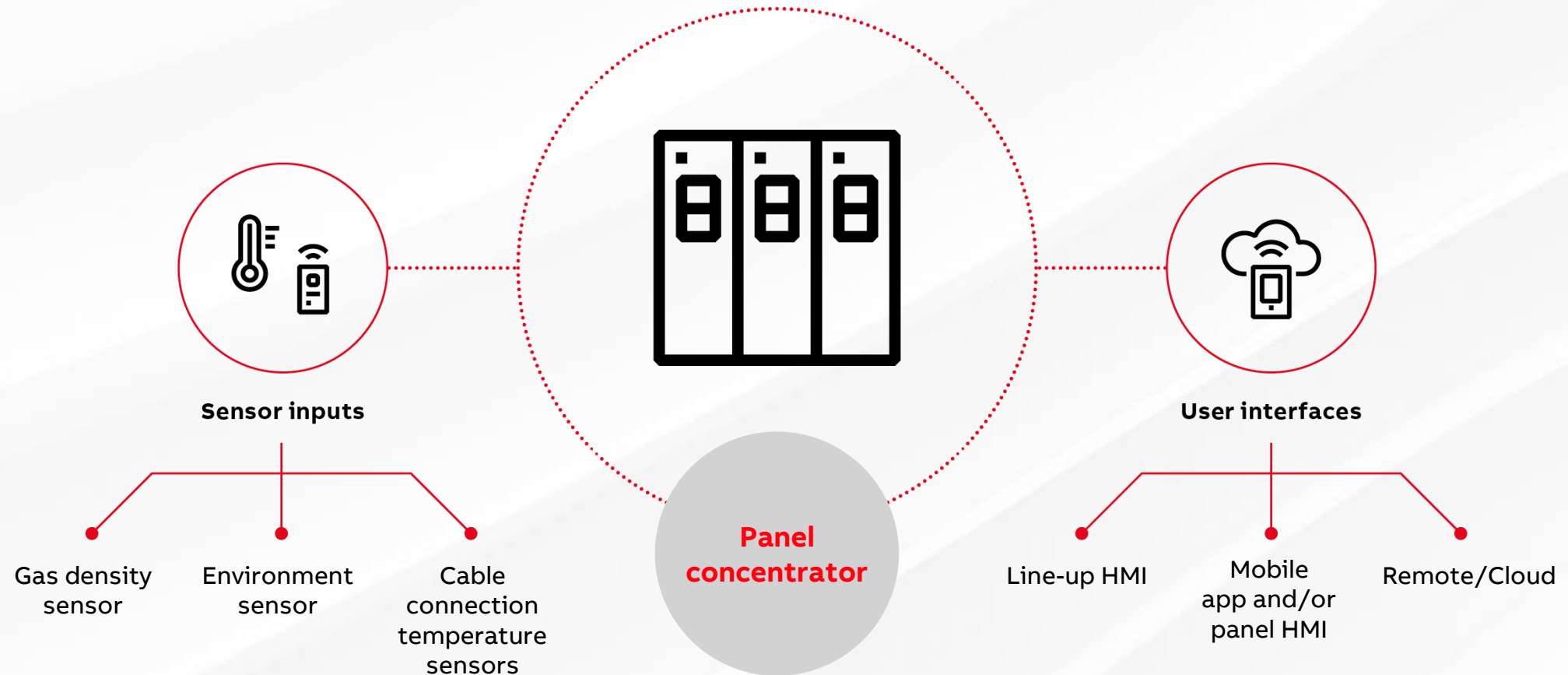
- Valuable insights on the switchgear condition
- Early detection of potential failures
- Local solutions or convenient access from remote locations

Monitoring & Diagnostics outlook

Maintenance Concept

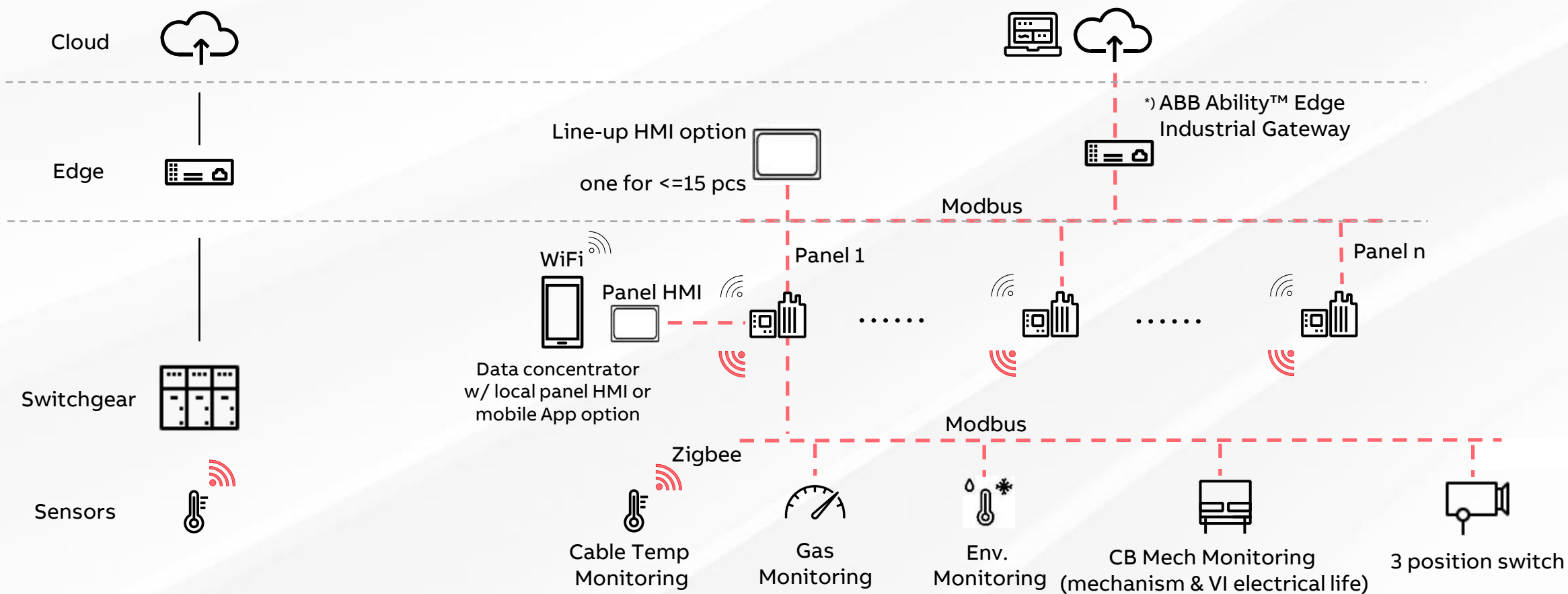


Our monitoring and diagnostics solution architecture



Monitoring & Diagnostics

Communication architecture





Digital benefits summary

Digital benefits summary

Digital Switchgear from ABB

Ready for the next chapter of a smarter GIS?



More Safety

- Low-energy signals on bus/sensor
- Even lower probability of failures



More Efficiency, More Sustainability

- Lower electrical losses
- Easy data access, local or remote



More Flexibility

- No exchange of CTs/VTs
- Less secondary wiring changes



Less planning efforts

- No early CT clarification
- Less limitations on I/Os



Less failures and outages

- Supervised communication
- Early detection of failures



Lower operational cost

- Easy planning & change handling
- Less outage cost



Flexible



Smart



Safe



Sustainable



ZX Digital
for peace of mind



Let's transform your GIS

Any questions?

Feel free to ask

Digital Switchgear from ABB



More Safety



More Efficiency,
More Sustainability



More Flexibility



Less
planning effort



Less failures
and outages



Lower
operational cost





Find out more, visit:

new.abb.com/medium-voltage/switchgear/gas-insulated-switchgear/iec-gis-primar-distribution/zx-digital

ABB