



ABB AG - EPDS

OEM/Panel Builder Partner Program

Concept for power parts and core modules



OEM/Panel Builder Partner Program



Let's grow

Agenda

Program

Creating win-win

Cooperation program

Concept – power parts and core modules

Benefits

Ratings and panel variants

Cooperation

Agreements

Training and support program

Tools & documentation

Events

Summary

OEM MV AIS concepts

Q&A

Concept

This program offers OEM (Original Equipment Manufacturer) / Panel Builder (PB) an easy and smooth way to start local added value for gas-insulated medium voltage (MV) switchgear and run a profitable switchgear business.

This concept utilizes well-proven ABB technology used in ABB's ZX family of gas-insulated switchgear (GIS) for primary distribution.

The good image and references of ABB products makes it easy to get approval for locally added value OEM products.

Technical support with documentation and training courses from ABB factory in Ratingen, Germany combined with client knowledge and experience of the local market, reduced import duties, logistic and various other advantages guarantee successful cooperation / partnership.

ABB is ready to commit and is seeking for long term cooperation to be able to plan and develop the business and make necessary investments for all parties.

Creating win-win situation through partnership

OEM / Panel Builder strengths – ABB strengths

Creating new business opportunities through partnership and the combination of:

- + **OEM / Panel Builder** know-how of their respective markets, engineering and production capabilities

- + **ABB** experience, state-of-the-art technology and quality in the field of gas-insulated medium voltage switchgear

= **win-win** situation



OEM/Panel Builder cooperation program

OEM / Panel Builder cooperation

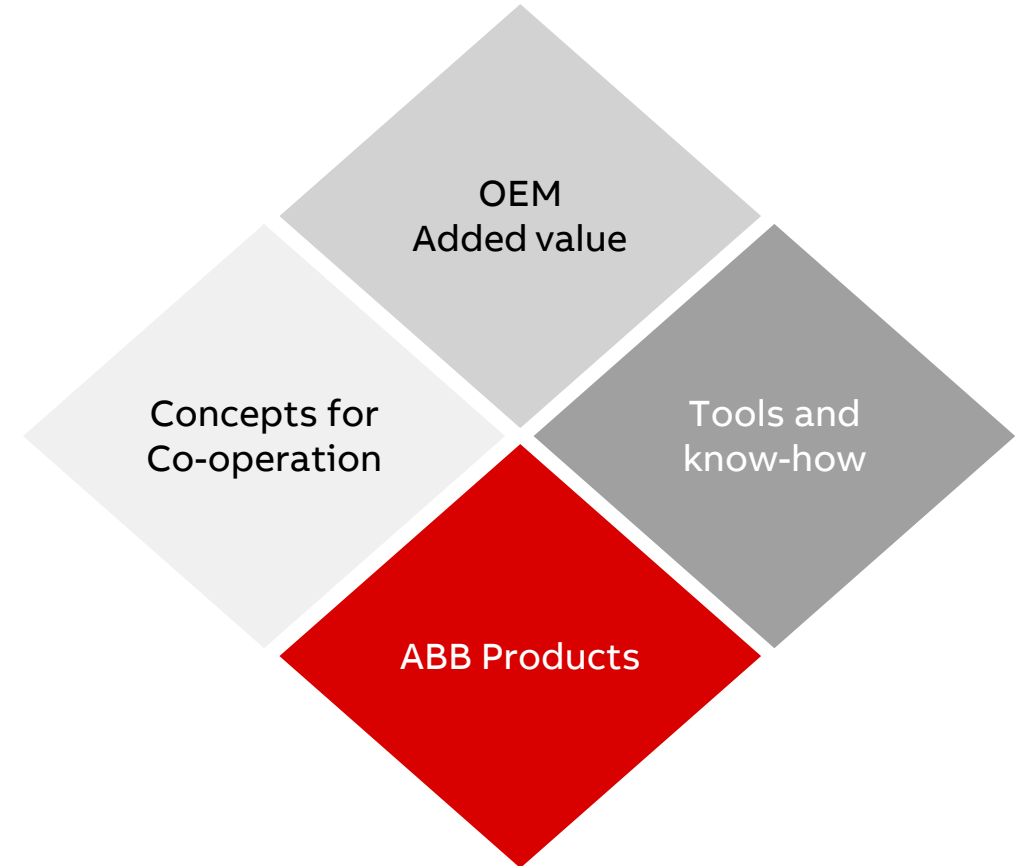
Strategic partnership

Results

- Capture more business opportunities
- Penetrate more markets / segments

Agreements

- Supply (commercial)
- Support (training)



Concept – power parts and core modules

Long term partnership with MV switchgear OEM / Panel Builder consisting of 3 principles:

1. ABB state of the art technology with standardized panel variants and software configurator
2. ABB cooperation agreement, technical documentation and technical support organization with training courses
3. Added value for OEM / Panel Builder



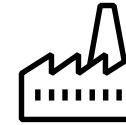
ABB Products



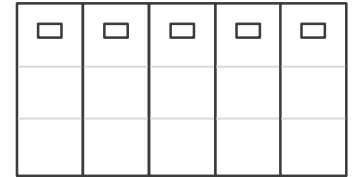
ABB Configurator Tools



ABB Cooperation



OEM Added Value



OEM / Panel Builder know-how of their respective markets/segments, engineering and production capabilities

OEM/Panel Builder benefits

1. Quick access to the market with MV GIS technology
2. Extension of current portfolio/Up-grade current portfolio
3. No further investment required
4. Fully type-tested products
5. Use of ABB product names with OEM / Panel Builder (PB) brand
6. Certified ABB partnership

Partner wins 2 years in the development of business

Ratings and standardized panel variants

OEM panel variants (4x) ZX0.2

Single busbar

... 36 kV

25 / 31.5 kA

630 / 1250 A

- Incoming and outgoing feeder panels
- Bussectionaliser panels
- Busriser panels **

OEM panel variants (7x) ZX2

Single busbar

... 36 kV *

... 40 kA

... 2000 / 2500 A

- Incoming and outgoing feeder panels
- Metering panels and sectionaliser
- Cable termination panels **

Cooperation for standardized panel variants

Cooperation program

ABB value

OEM value *



ZX0.2 / ZX2
For small & medium size partner
Level 1

Power parts with low voltage compartment (LVC)



Customization + testing

- Engineering
- LVC wiring
- Transformers / sensors
- Relay
- FAT



ZX0.2 / ZX2
For small & medium size partner
Level 2

Power parts w/o LVC



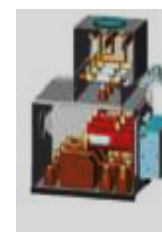
Manufacturing + assembling + testing

- Engineering
- LVC manufacturing and wiring
- Transformers / sensors
- (ZX0.2: Busbar)
- Relay
- FAT



ZX0.2 / ZX2
For large partner
Level 3




Core modules (gas tanks)






Manufacturing + assembling + testing

- Engineering
- LVC manufacturing and wiring
- Transformers / sensors
- (ZX0.2 Busbar)
- Relay
- Metal sheets, cable compartment frame, pressure relief ducts etc.
- FAT

Agreements

	<div>Supply & Support Agreement</div> <div></div>	<div>Supply & Support Agreement</div> <div></div>	<div>License Cooperation Agreement</div> <div></div>
Scope of supply	Power parts with LVC	Power parts w/o LVC	Core modules
Labeling	OEM / PB brand	OEM / PB brand	OEM / PB brand (Manufactured under ABB license)
Product name	ZX0.2, ZX2	ZX0.2, ZX2	ZX0.2, ZX2
Technology transfer	No	No	Yes
Use of ABB TTD *	Yes	Yes	Yes
Fees and charges	No	Yes	Yes

Agreements (in detail)

	Supply & Support Agreement 	Supply & Support Agreement 	License Cooperation Agreement 
Scope of Supply	Power parts (PP) + LVC + peripheral structure ¹	PP + peripheral structure ¹ w/o LVC	Core modules w/o LVC, no peripheral structure ¹
External branding	OEM / PB logo; w/o ABB logo	OEM / PB logo; w/o ABB logo	OEM / PB logo + text «Manufactured under license of ABB»; w/o ABB logo
Product name (External identification)	ZX0.2, ZX2	ZX0.2, ZX2	ZX0.2, ZX2
Power Parts & Core Modules	Internal rating plates include ABB logo		
Label inside LVC (Internal labeling + identification)	Engineered and wired by OEM / PB (labeled by OEM / PB)	LVC manufactured, assembled and wired by OEM / PB (labeled by OEM / PB)	Manufactured under license of ABB (labeled by OEM / PB)
Warranty carried by ABB	Power Parts + LVC (w/o wiring) = 24 months ²	Power Parts = 24 months ²	Core Modules = 24 months ²
Customization + Testing by OEM / PB	Secondary engineering and wiring + FAT + SAT + Service	LVC manufacturing + secondary engineering, wiring + FAT + SAT + Service	LVC manufacturing + secondary engineering, wiring + peripheral structure + FAT + SAT + Service

Training and support program (1/2)

Course part 1 Type of training provided by ABB factory

Time

Category participants

Power parts

- General information:
 - a) Understanding of MV GIS-philosophy
 - b) Information on MV GIS ZX types
 - c) Safety
- Sales & Marketing
- Product and configuration tool (basic)

1 - 2 days

General Management,
Sales and Marketing

Project Manager (optional)

Course part 2 Type of training provided by ABB factory

Time

Category participants

Power parts

- Secondary engineering; part 1 (advanced)
- DA relay's (Basic) *
- Transformers/sensors (Basic) *
- Product and configuration tool (Advanced)
- Primary engineering: selection of correct drawings and material for required panels
- Secondary engineering (secondary interfaces and control of ZX panels); part 2 (advanced)
- Manufacturing/assembly plus routine testing (FAT)

2 - 3 days

Testing engineer & Design engineer

Tendering engineer

Project Manager

Training and support program (2/2)



- Sales and marketing training
- General product information & safety training
- Introduction LVC assembly & wiring
- General technology training
- Training assessment programs
- Software tool training



- Production process / best practices
- FAT
- Suppliers references



- Drawing transfer
- Manufacturing & assembling support
- Secondary Engineering support
- Installation and commissioning support (via ABB Service organization)


Tools & documentation

OEM products and news



Developing high value partnerships
Growing together across the power
products value chain

Power and productivity
for a better world™ **ABB**



Product overview brochure

ABB Medium Voltage Products
Our one-stop approach for every
medium voltage application

Power and productivity
for a better world™ **ABB**



Medium Voltage Products

Distribution Automation
Recommended offering
for medium-voltage switchgears

Power and productivity
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ABB
The corporate
technical journal

review

Smarter switchgear for substations 11
Optimizing aging infrastructure in a modern grid 22
New digital fault detection you can Relion 33
ABB's evolving MV product portfolio 48

Special Report
Medium-voltage products

Power and productivity
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Tools & documentation

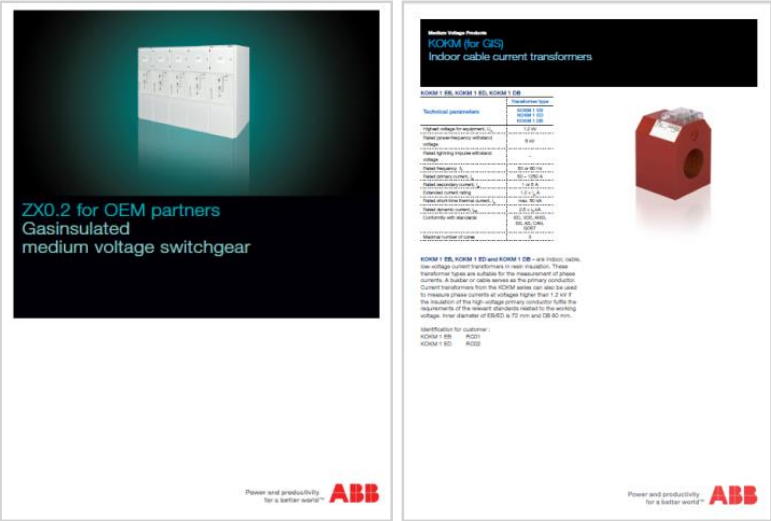
LVC assembly instruction



Concept



Documentations & tools




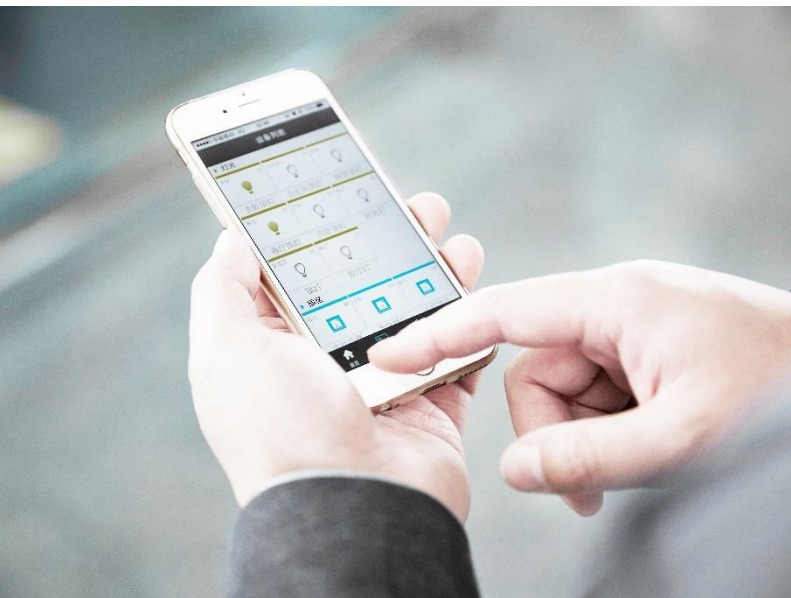
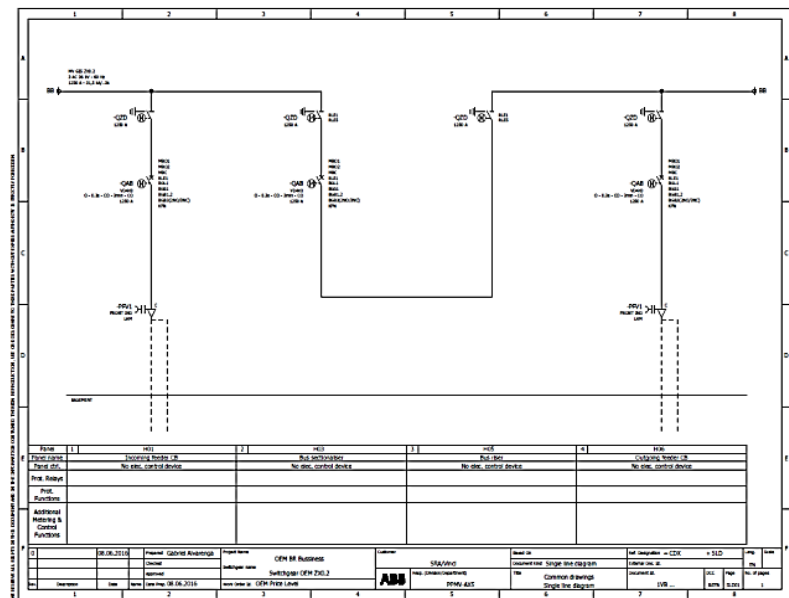
Software tool:
OEM/ZXPro (configurator)



Tools & documentation

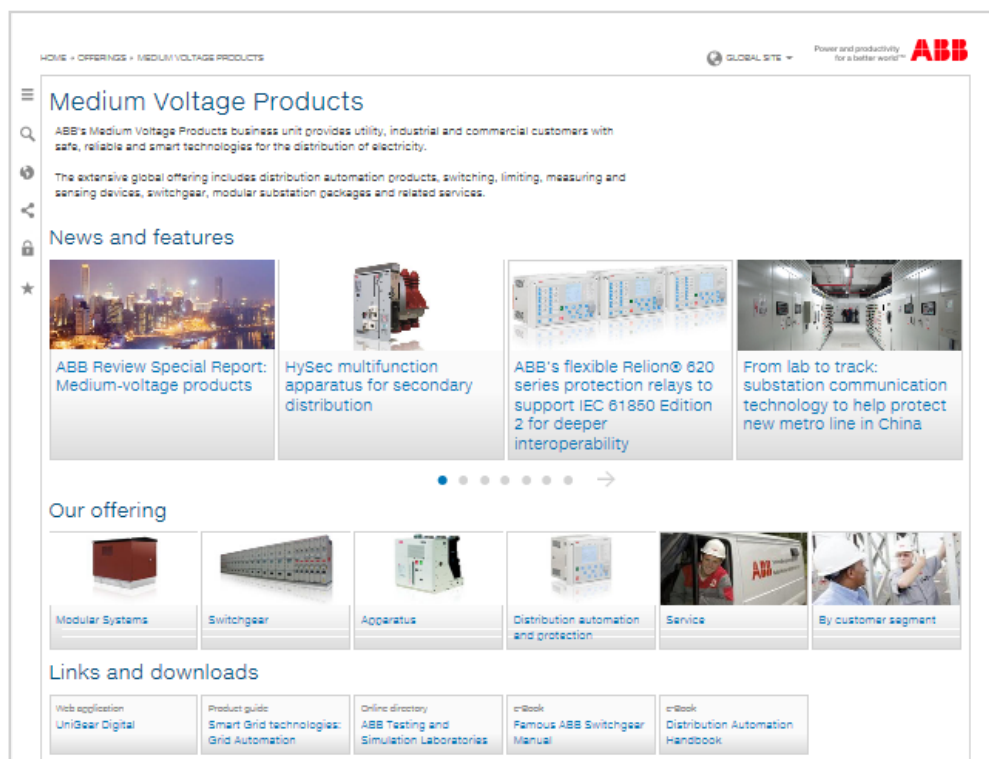
Feasibility study

ABB ABB AG, PPMV-AX Oberhausener Straße 33 40472, Ratingen, Nordrhein-Westfalen GERMANY					
Project name	OEM BR Bussiness	Issuer	Gabriel Alvarenga	D	06.06.2016
Switchgear name	Switchgear OEM ZX0.2	Telephone	0049 2102 121812		
Switchgear type	ZX0.2 SBB	Customer	SRA/Vinci	Fax	
Project number	Work order id.	E-mail	gabriel.alvarenga@de.abb.com	Rev.	Date
OEM Price Level					
Switchgear drawings 36 kV Gas Insulated Medium Voltage Switchgear					
Technical offer					
06.06.2016	Project: Gabriel Alvarenga	Project name: OEM BR Bussiness	Customer: SRA/Vinci	Switchgear: Switchgear OEM ZX0.2	ABB
06.06.2016	06.06.2016	06.06.2016	06.06.2016	06.06.2016	06.06.2016



Tools & documentation

www.abb.com/epmv

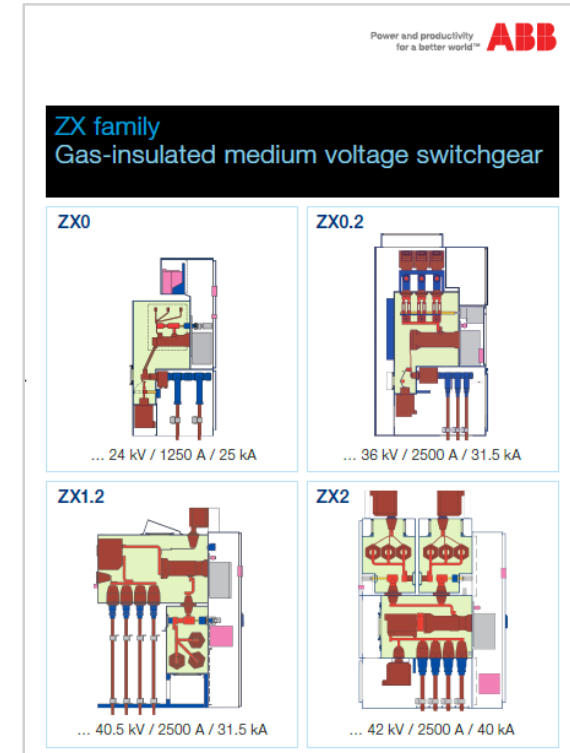


Tools & documentation

Roll-up



Poster



Tools & documentation

SSA part A

Sales & Support Agreement(SSA) part A
Supply Agreement

Confidential



Signed by "CP": [Name of CP company]

Signed by "Supplier": [Name of local ABB Sales Organization]

Signature

Signature

Full name

Full name

Date & Place

Date & Place

Signature

Signature

Full name

Full name

Date & Place

Date & Place

Effective date (dd-mm-yyyy): [Effective date of Agreement]

(Part A) – Between SUPPLIER & CP / Version C – November 15, 2016 | page 1/2

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for a better world™

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Supply agreement



SSA part B

Sales & Support Agreement(SSA) part B
Support Agreement

Confidential



Signed by "CP": [Name of CP company]

Signed by "Support Supplier": [Name of local ABB Factory]

Signature

Signature

Full name

Full name

Date & Place

Date & Place

Signature

Signature

Full name

Full name

Date & Place

Date & Place

Effective date (dd-mm-yyyy): [Effective date of Agreement]

(Part B) – Between SUPPORT SUPPLIER & CP / Version C – November 15, 2016 | page 1/2

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Support agreement



Events

OEM days



Customer days



OEM / Panel Builder exhibits



Benefits for OEM / Panel Builder partner

Summary

Extension of own portfolio – closing gaps

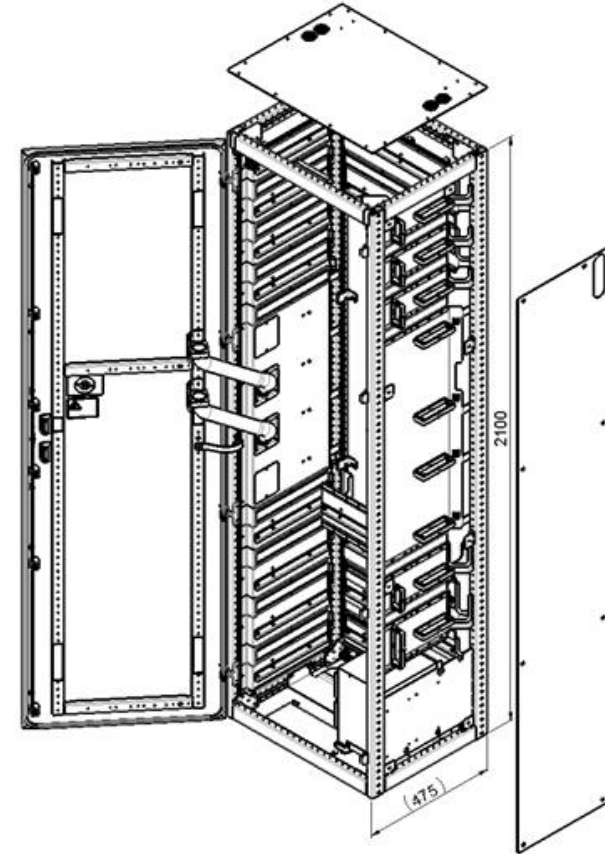
Added value – development possible

- Power parts (with LVC) - SSA
- Power parts (w/o LVC) - SSA
- Core modules (gas tanks) – volume based business plus investments - LCA

Due support and trainings from ABB MV GIS factory

Local Sales and Marketing support

OEM / Panel Builder partnership



OEM MV AIS concepts

UniSec



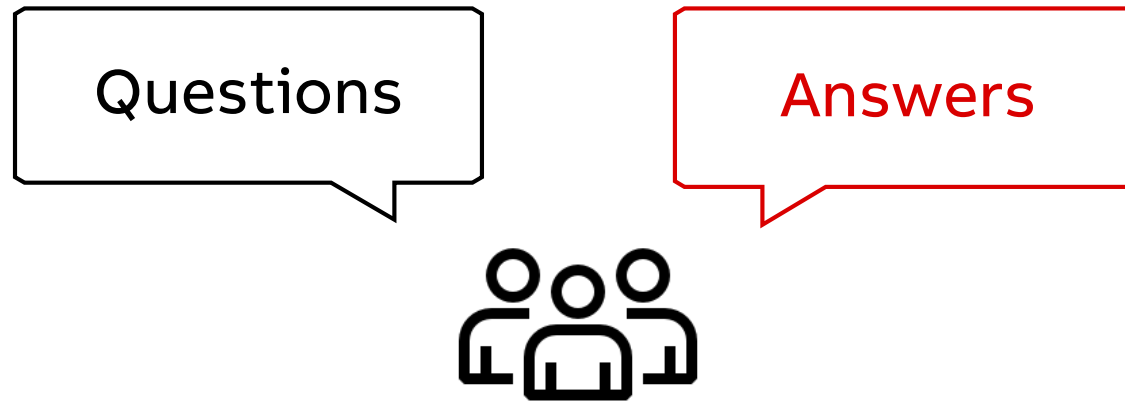
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UniSafe



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Q&A





Thank you!

ABB