



For an optimal user experience, please use the arrows and navigation toolbar at the top of each page.

## **Why risk it?**

ABB's Modernization Retrofits are designed to help you optimize your critical electrical assets







# Protect the performance, reliability and safety of your critical electrical assets with ABB's Modernization Retrofits

ABB's Modernization Retrofits is a portfolio of cost-effective and reliable solutions to upgrade your switchgear that reduce total cost of ownership and extend the lifespan of electrical systems by up to 30 years.

Medium-voltage (MV) and low-voltage (LV) circuit breakers are critical to the continuity of your business. The outdated MV and LV breakers currently protecting your switchgear and distribution systems could be putting costly equipment and people's safety at risk.

## Take an intelligent approach to risk management

Upgrading old or obsolete breakers with high quality components from a reliable partner will extend the working life of your electrical distribution systems while reducing maintenance requirements and enhancing overall system safety. What's more, fitting up-to-date breakers will ensure that systems meet the latest electrical standards and safety regulations.

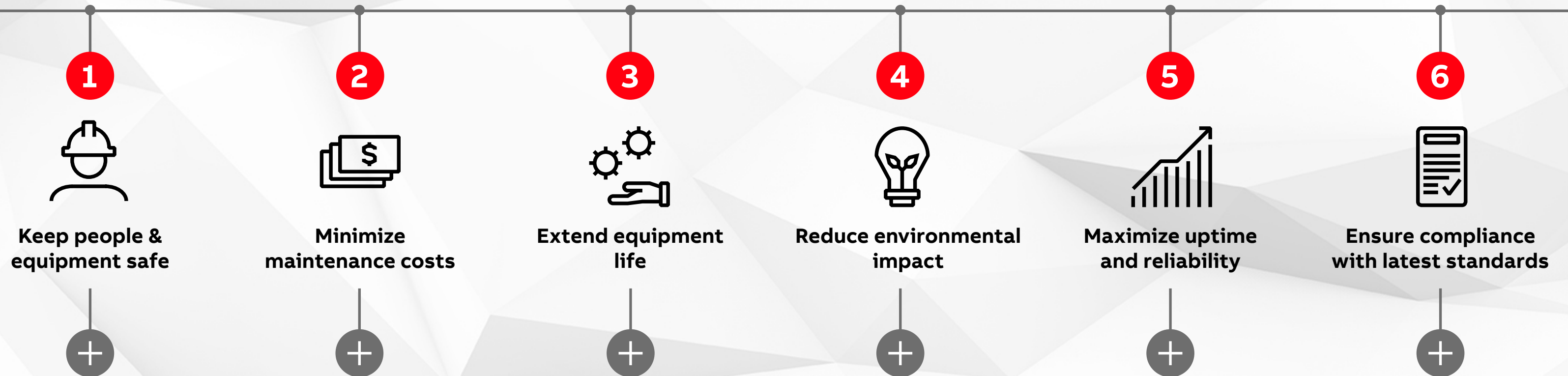
[CLICK HERE TO SEE THE BENEFITS](#)

Use the menu bar or arrow indicators at the top of the page to navigate through the guide or return to the index.





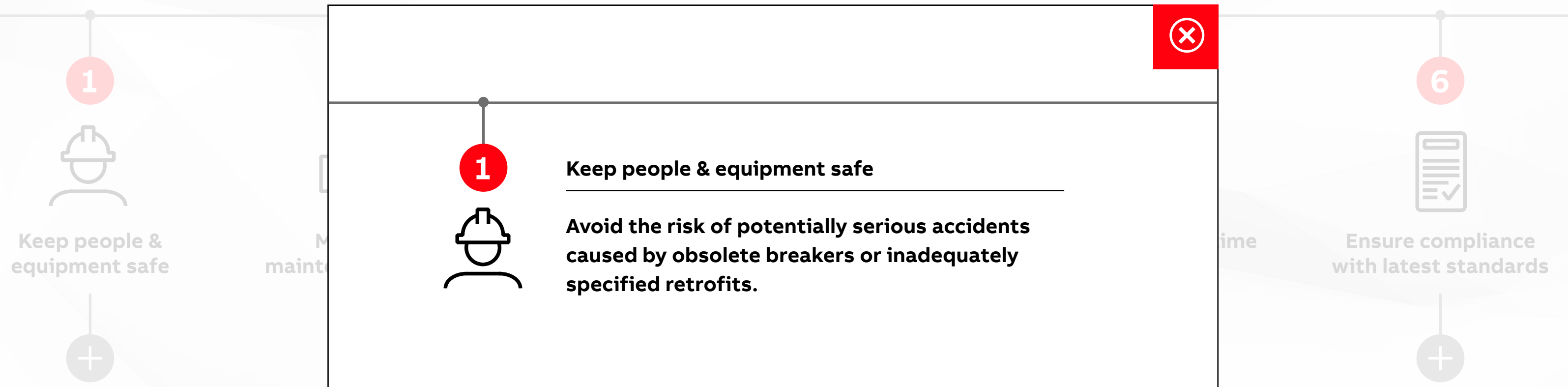
## Count the benefits of retrofitting obsolete circuit breakers with ABB's Modernization Retrofits



[CLICK HERE TO MAKE YOUR UPGRADE JOURNEY MORE SUSTAINABLE](#)

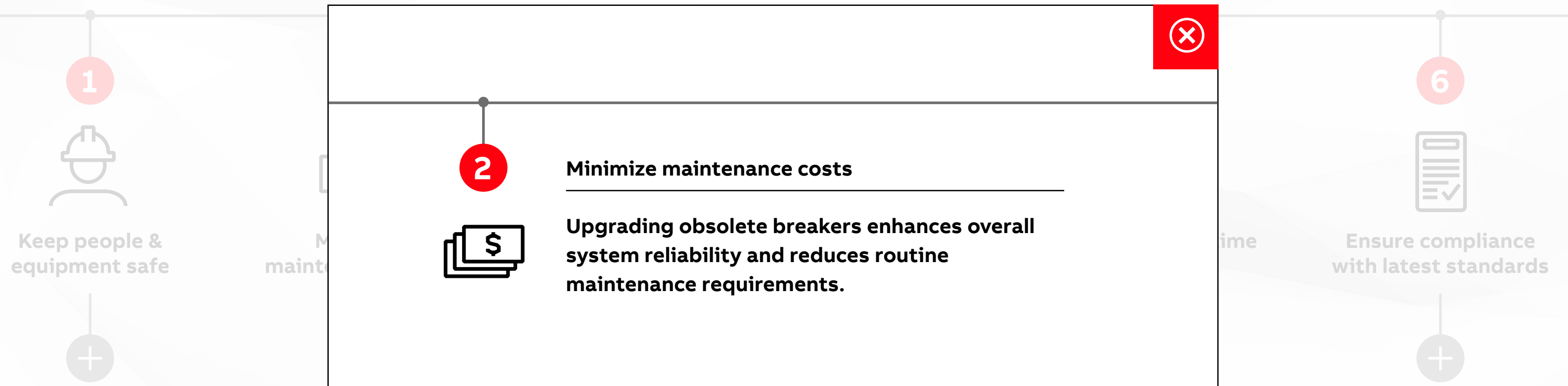


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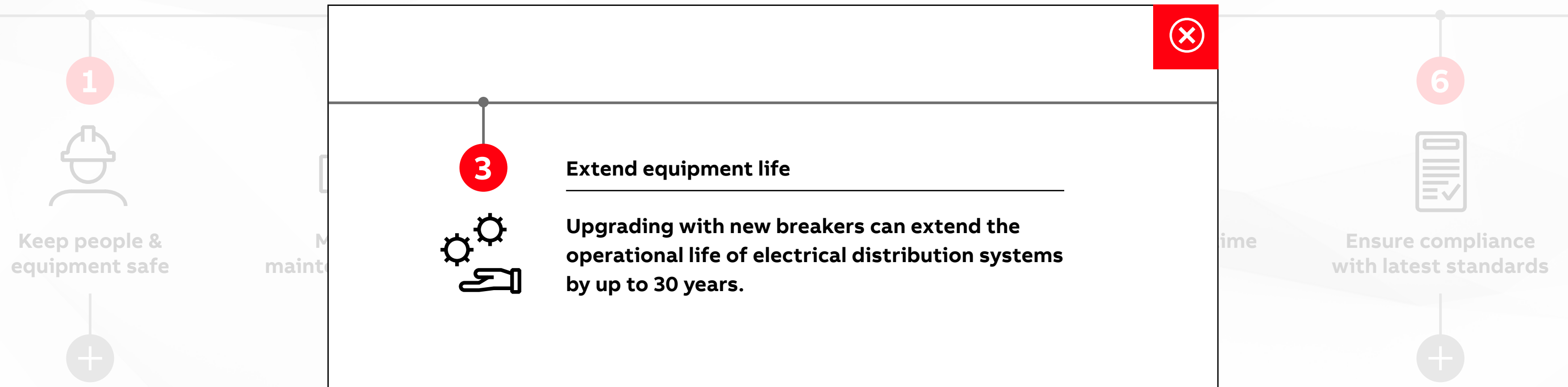


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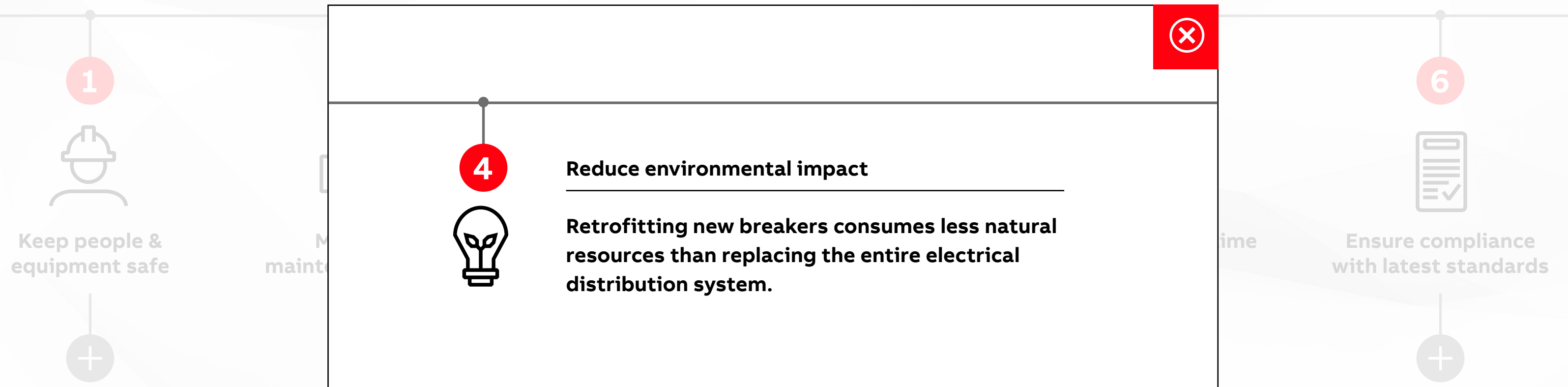


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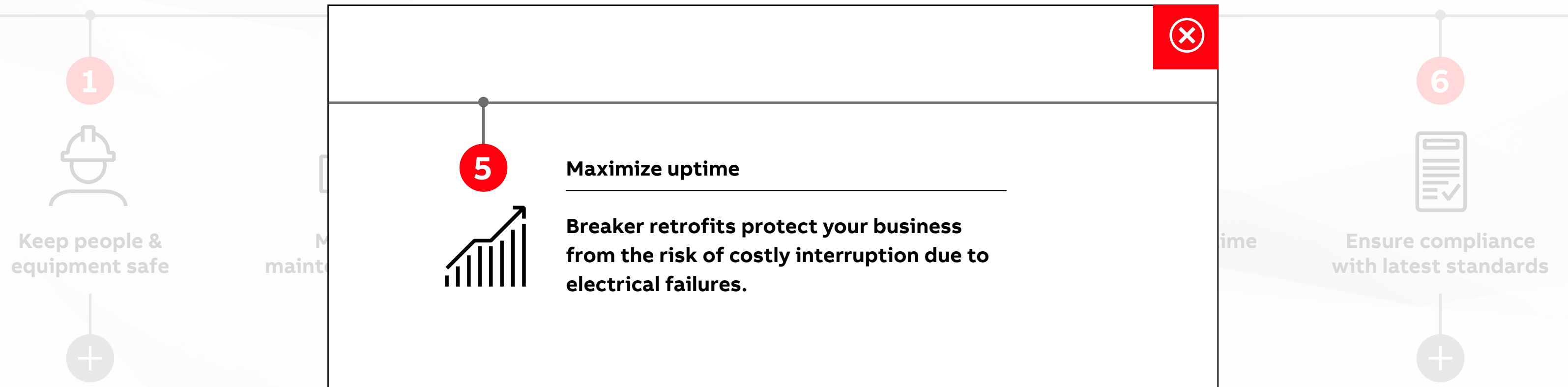


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## Making your upgrade journey more sustainable

Optimizing critical electrical assets with ABB's Modernization Retrofits can significantly extend the operational lifespan of existing systems.

Only replacing obsolete and non-maintainable components – rather than the entire switchgear – reduces the consumption of precious raw material resources such as copper and steel. It also enables a corresponding reduction in carbon emissions due to manufacturing processes and transportation.

ABB's Modernization Retrofits can enhance your switchgear with new digital functions and capabilities, further increasing their efficient operation. Connecting devices to ABB Ability™ Energy and Asset Manager also enables accurate monitoring of energy consumption, allowing the identification of further energy savings.



Increasing the lifespan of switchgear realizes these savings in natural resources:



About 800 tons of  
copper per year



About 1200 tons of  
steel per year



About 30 kilotons of  
CO<sub>2</sub> equivalent  
emission avoided in  
the last 5 years

[CLICK FOR A SHARED COMMITMENT TO SUSTAINABILITY](#)



# Making your upgrade journey more sustainable

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## A shared commitment to sustainability

ABB is committed to helping customers reduce their annual CO<sub>2</sub> emissions by more than 100 megatonnes by 2030. This is achieved through innovative technologies that reduce energy use in industry, buildings, and transport sectors that together account for nearly three-quarters of global energy consumption.

Achieving your digital and sustainability goals is a complex journey. Our Advisory Services are available to support you in identifying and executing opportunities for digital modernization and transformation.



ear realizes  
sources:



About 30 kilotons of  
CO<sub>2</sub> equivalent  
emission avoided in  
the last 5 years

CLICK FOR A SHARED COMMITMENT TO SUSTAINABILITY



## Make an informed decision

Choosing the right circuit breaker retrofit is critical to the performance and safety of your MV and LV electrical distribution systems.

Here are seven pointers for success when you're planning your next upgrade.

[CLICK ON THE PLUS ICON TO FIND OUT MORE >>](#)







## Make an informed decision

Choosing the right circuit breaker is critical to the performance of your MV and LV electrical distribution system.

Here are seven pointers to help you when you're planning your next project.

CLICK ON THE PLUS ICON TO EXPAND

### Check your new breaker specifications are up to the job

Electrical systems grow and evolve over time. Advances in our understanding of circuit breakers – and how they interact with the rest of the system – could mean you need a replacement part with specifications that are different from the original.

NEXT TIP 

Check your new breaker specifications are up to the job



Don't trust a simple duplicate

Read beyond the nameplate

servicing is too



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### Don't trust a simple duplicate

Attempting to simply duplicate an original part isn't a substitute for type testing.

The proper design of a circuit breaker also considers how that part interacts with the rest of the electrical system. Thorough type testing is often the only way to verify its real-world performance.

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### Read beyond the nameplate

The specifications engraved on an outdated circuit breaker's nameplate may reflect standards and testing methodologies that have changed significantly since it was designed and fitted.

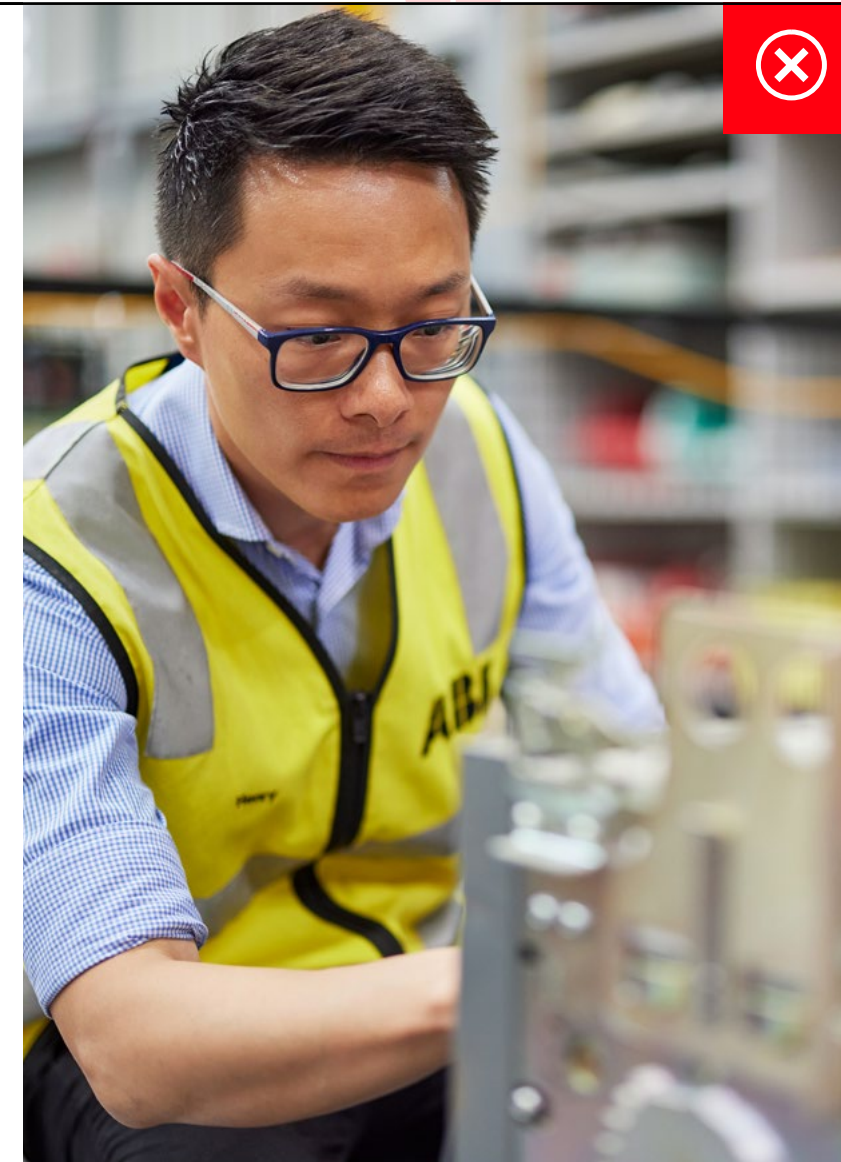
Be sure to talk with your retrofit breaker supplier to understand how standards have changed, and the implications for your component choice.

[SEE LATEST BREAKER AND SWITCHGEAR STANDARDS](#)

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### Standards for circuit breaker and switchgear retrofits

#### IEEE C37.59™-1991

Requirements for MV and LV conversion of power switchgear: created in response to deficiencies in design and testing.

#### IEC 62271-307

Guidance on applying type tests from one MV circuit breaker or switchgear design to another.

#### IEC 60947-2 and IEC 61439-1 & -2

Applicable to LV IEC circuit breakers and switchgear.


 READ BEYOND THE NAMEPLATE

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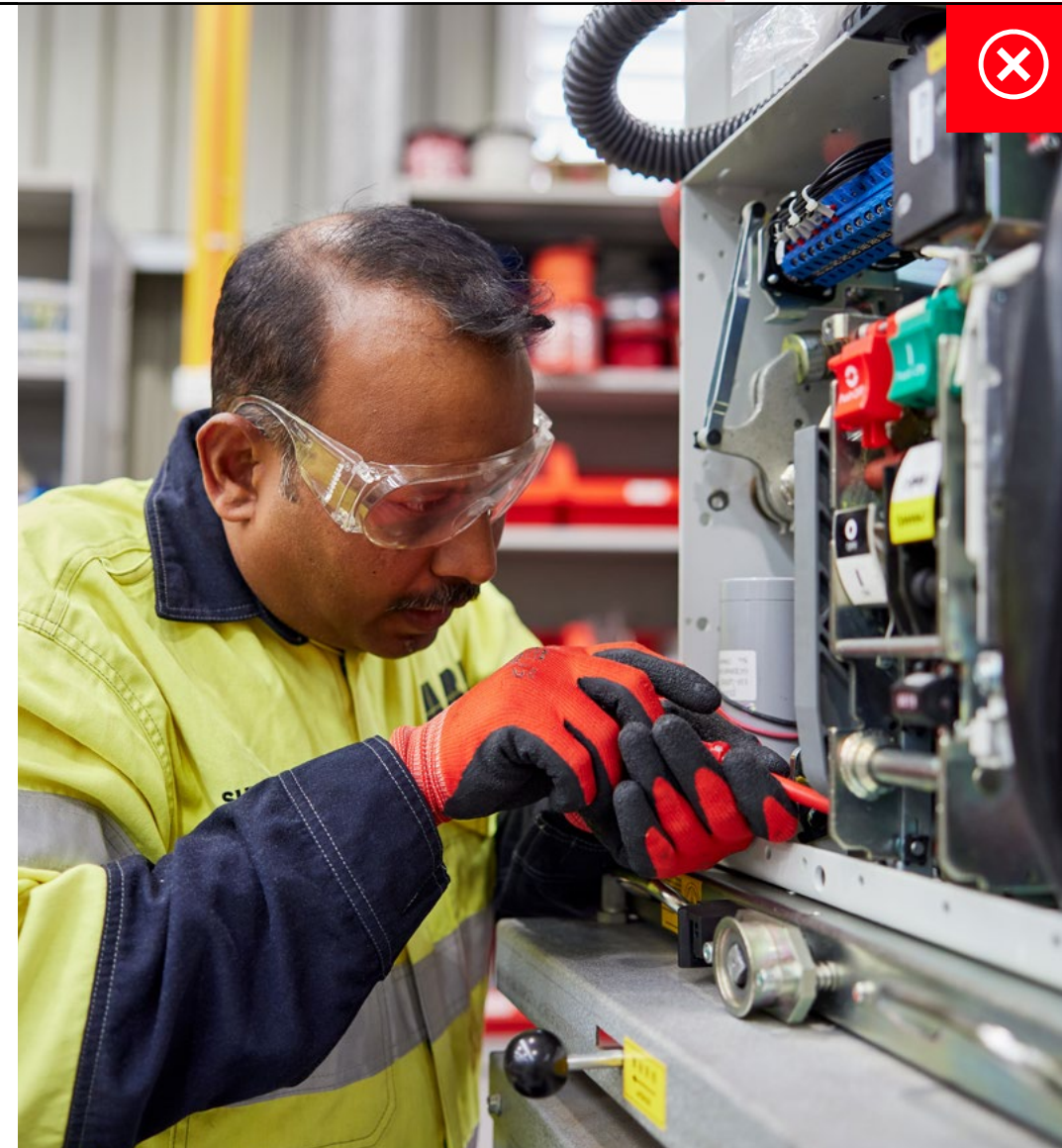
### Panel servicing matters too

When a new circuit breaker is being installed into a panel, it is often the case that the panel is as old as the circuit breaker that is being removed and it has often been serviced even less.

It's important to service the whole panel whenever a new breaker is retrofitted.

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### A local partner isn't always the best answer

It can seem reassuring to have a supplier who's based nearby. But if there's an issue that needs resolving, a local partner may not always have access to the resources and technical skills to sort things out.

By dealing directly with ABB you'll enjoy access to best-in-class advice and technical support to keep you up and running.

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### Insist on the best breaker you can buy

Circuit breakers produced in large numbers by top-tier manufacturers offer the highest levels of performance and reliability.

They're designed by highly experienced engineering teams with access to sophisticated tools and measurement techniques. This will help to ensure the success of your entire breaker and electrical systems upgrade project.

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### Don't be afraid of a supplier who asks lots of questions

A supplier who asks the right questions is demonstrating that they're genuinely interested in fulfilling your needs.

At ABB we work closely with our customers to understand their circuit breaker upgrade requirements, ensuring our solution provides appropriate technical performance as well as value for money.

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## Your experienced partner

At ABB we understand the special challenges associated with retrofitting MV and LV circuit breakers. We recognize that even small-scale upgrade projects require the same tools and expertise that are used for products planned for thousands of production units.

[CLICK FOR THE LV AND MV SELECTOR KITS](#)

Our global network of experts includes dedicated field application engineers and consultants with years of experience across a broad range of industries. This pool of exceptional talent and engineering resources ensures the excellence of our switchgear life extension solutions.

Don't leave it to chance when you're planning your next electrical systems upgrade and modernization project. Benefit from the practical support and peace of mind that come from working with a capable partner right from the start of every breaker retrofit project.

[CLICK FOR THE ROI CALCULATOR](#)







# ABB's Modernization Retrofits protects your most critical electrical assets



CONTACT AN ABB EXPERT

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Electrification Service Division

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[https://campaign-el.abb.com/abb-modernization\\_home](https://campaign-el.abb.com/abb-modernization_home)

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