



The Seven Principles of Successful Product Testing and Certification

How the world's smartest brands approach testing and certification to manage their global market presence



Safety. Science. Transformation.™



Introduction

Understanding which tests and certifications are required gives you only part of the picture. Product launches are commonly stymied and delayed by what product launch teams don't know. Many factors are at play when it comes to entering a market — especially local regulations, which can be difficult to interpret. You need to be aware of what can slow you down. It's important to work with local experts as early in the process as possible to understand the regulations and requirements that might be problematic.

For example, although there is a trend for some countries in a region to accept a single Marking, such as the CE Marking in Europe and the Gulf Marking (G Marking) for members of the Gulf Cooperation Council, it can be easy to miss the subtleties of national variations and dynamics unless you are working with an experienced local compliance team. Mapping the regulatory landscape and identifying your blind spots early in the product development phase are essential to avoiding risks.



1 It's not about testing, it's about markets



For manufacturers, having comprehensive market knowledge is paramount to a successful market presence for any product. Testing and certification should be integral parts of a go-to-market strategy. The goal is to launch a product and compete successfully. That means you should be thinking beyond simply getting a series of tests done. You need to develop a deep understanding of the landscape in each region and how testing and certification requirements fit into your long-term strategy. A successful product launch hinges on a strategy that includes testing to your target market requirements and availability of local experts to offer on-site support.

Knowing your markets

Identifying the tests and certifications that a market demands may appear very straightforward. But meeting requirements and launching can be far more complex than completing a list of tests. You need to be aware of all the regulatory and compliance stakeholders as well as the other major players who can influence your product's fate. They must be taken into account as you plan your testing strategy and thoroughly incorporated into your launch strategy.

Ideally, your staff or your testing partners will have experience in local markets. The subtleties of local requirements, and local languages, can play crucial roles in a successful launch. Figure 1 summarizes the stakeholders who can influence your products' access to markets through regulations and standards.



Standards and codes

- Standards development organizations (SDOs)
- Standards technical panels (STPs)
- Authorities having jurisdiction (AHJs)
- Code officials



Conformity assessment bodies (CABs)

- Certification
- Inspection
- Testing
- Auditing
- Verification



Demand drivers for third-party conformity assessment

- **Market influencers:** Government and regulatory bodies
- **Retailers, distributors, associations** (trade, industry, consumer)
- **Government and regulatory bodies:** U.S. (FCC, OSHA), European Commission, etc.

Figure 1
Compliance and regulatory influencers

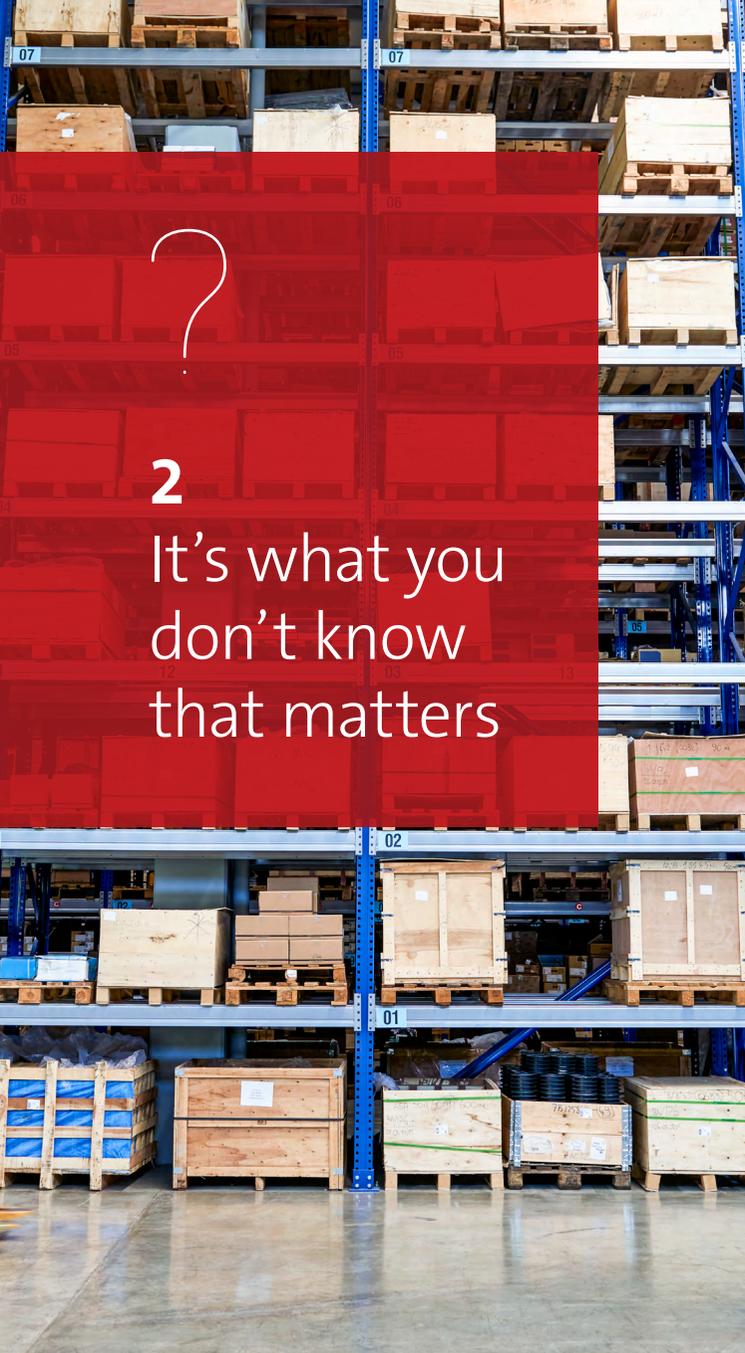
Going beyond your market

If you're just looking to get a single test done for a single market, you are probably taking a far too limited approach. As you're developing your testing, you should be asking:



In many cases manufacturers get so focused on testing and certifications for one market, that they miss significant opportunities to scale and grow.

You may be certifying for one market now, but a small change in your testing plan could prepare you to readily expand to other markets six or 12 months down the line. You could not only cover more markets with the same set of testing data but also gain valuable information that will help you prepare your product for a broader launch. In many cases, small design modifications early in the development phase can reap huge dividends for future market development. The right product-testing strategy can both help you launch successfully and drive ongoing market expansion and success.



2

It's what you
don't know
that matters

Understanding which tests and certifications are required gives you only part of the picture. Product launches are commonly stymied and delayed by what product launch teams don't know. Many factors are at play when it comes to entering a market — especially local regulations, which can be difficult to interpret. You need to be aware of what can slow you down. It's important to work with local experts as early in the process as possible to understand the regulations and requirements that might be problematic.

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It's not just about regulations

While obtaining proper certifications is always a critical consideration in planning product launches, manufacturers often overlook details of documentation, which can easily compromise launch timelines. Make sure you know what documents are required, how they need to be issued and what the approval processes are. The same goes for labeling and packaging requirements.

This is where deep knowledge of the market and friendly local relationships can make the difference between costly delays and an on-time, successful launch. The right testing partner will be looking ahead, helping you see areas where your team lacks expertise or adequate time. That's how you can anticipate and head off challenges.



Are you doing the right types of testing?

When it comes to designing electronic products, many teams focus solely on basic or standard requirements. Certainly, it's easy to get an electromagnetic compatibility (EMC) test done anywhere. However, as the pressure to innovate intensifies and global regulatory markets change with increasing regularity, the risk of not planning for the correct testing requirements grows.

New products often create unforeseen testing needs. Are you sure that you'll be able to test your product when the time comes? How will your markets view the technologies you're deploying? What is likely to change as you approach your launch?



3 Speed to market matters — evaluate the impact of the unknown

Getting to market quickly is a major factor in a product's success. This is especially true in times of rapid innovation, when competitive advantages don't last long. The management consulting firm OakStone Partners estimates that a delay can cost a company upwards of 15 to 35 percent of a product's net present value (NPV) (i.e., the difference between the present value of the future cash flows from an investment and the amount of investment.) Instead of seeing the testing process as just a box-checking exercise, manufacturers should view it as an opportunity to identify and mitigate risks to their launch schedule.

Can your testing plan withstand changes to your timeline?

Because most product launch schedules are planned over multiple years, there is enough time for a massive range of circumstances to put pressure on them. While testing will certainly be built into such a schedule, the big question is whether the testing plan will accommodate those unforeseen pressures. Are your testing solutions scalable enough and flexible enough to accommodate the inevitable roadblocks and delays that will occur?

UL Solutions recently helped a major global instruments manufacturer save \$30 million through flexible, customized testing solutions. The company was in the process of launching a new wireless enabled platform when development delays put them several weeks behind schedule, threatening their launch date. Because they had built a partnership with UL Solutions from the early stages of product design, UL Solutions was able to quickly implement an accelerated testing program to ensure that they made up the lost time and kept their launch date. The delay would have cost nearly \$30 million in lost revenue.

Speed-to-market doesn't happen by chance. It happens because testing resources are integrated into the launch plan. A strategic testing partnership can be a major asset when meeting the challenges of a product development timeline.



4

Manage your portfolio, not just your individual products



Taking a strategic approach to testing means managing compliance requirements not on a product-by-product basis but rather across your portfolio. Successful global manufacturers don't just plan for the launch of single brands but manage a long-term presence across their markets.

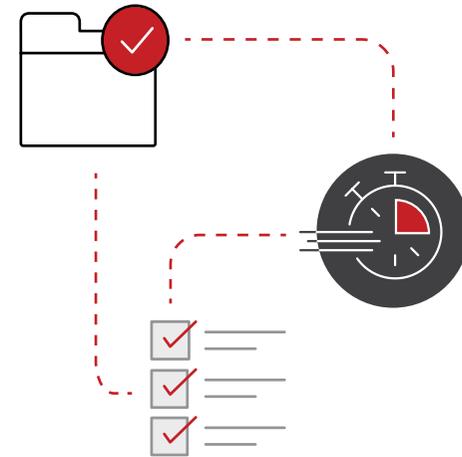
Large and mid-size companies have multiple certifications to manage. For them, part of managing a portfolio means mitigating risks across their business, ensuring entire product lines stay compliant globally. Product and compliance leaders at the world's most successful companies constantly anticipate potential disruptions to their certifications by implementing and managing an ongoing regulatory

review process. An integrated testing program with a global partner is an essential ingredient of this process.

It's not just about keeping your products compliant; it's also about finding new opportunities and ensuring that you can take advantage of them. Testing and certification should be part of your product marketing strategies. Are there markets you can be expanding into? Will changing regulations open new opportunities for your products? The information you receive as you test and certify your products can help you identify risks (and opportunities) that impact your wider go-to-market plans and long-term marketing road map.



5 Anticipate changes — the regulatory environment is fluid



When it comes to technology regulation, change is an absolute constant. Across the globe, the rapid pace of innovation, along with shifting political and legal landscapes, has created highly dynamic regulatory environments.

In a review of regulatory changes over an 18-month period (January 2020 to June 2021), UL Solutions tracked more than 1,300 changes impacting products and conformity assessment schemes — nearly 2.5 regulatory changes per day. These shifts can easily derail short- and long-term product launch plans.

Figure 2 presents a sample of regulatory changes identified over three days in UL GO, an online subscription service that makes it easier to get up-to-to date information about regulatory requirements.



Figure 2
Sample regulatory changes from UL GO

Your compliance team and your testing partners need to keep a close eye on shifting regulations, not only to be aware of changes but also to anticipate where changes are likely to happen. These changes take many forms — from new standards evolving for emerging technologies, such as 5G , to new labeling requirements to countries mandating that certain technologies be tested in-country (something common in China).

The last thing you want to do is to spend years designing a product around a set of requirements that will be obsolete by the time you're ready to go to market.

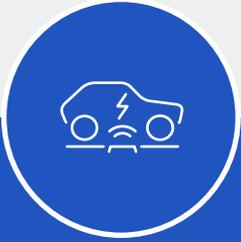


6 Don't test in isolation



To put a strategic testing program in place, you need to work with a partner who can provide a broad array of testing and certification services. The same set of test data can typically be used to satisfy more than one requirement, helping you plan for an efficient market launch and secure potential competitive advantages. For example, while every product category in every country will require an EMC test, a smart approach will encompass a broader range of testing at the same time in order to ensure product safety and quality while identifying market access risks and opportunities.

You can simplify compliance across markets while saving time, money and complexity by bundling product tests and certifications to meet all relevant national and regional market standards. The key testing requirements you should be considering include the following:



EMC

EMC testing assesses the ability of electronic devices to operate as expected in proximity to other electronic devices or in the presence of electromagnetic emissions. This is the most basic test required in nearly every country for every electronic product.



Wireless testing

Wireless testing assesses the real-life performance and functionality of products incorporating wireless technologies, such as Bluetooth, Wi-Fi and cellular connectivity. Wireless technologies, especially cellular connectivity, have complex regulatory requirements across different countries. As the world races to roll out 5G, only a few labs in the world are certified to perform 5G tests. Very few manufacturers have experience with 5G certifications, so they should seek help from a trusted partner.



Interoperability tests

Interoperability tests, or product-to-product testing, help ensure products function properly with the companion devices that are likely to exist in real-world use.



Safety

Product safety is a fundamental concern for consumers. In a study conducted by *Consumer Reports* in July 2020, 97% of American consumers expected that manufacturers tested their products for safety before putting them on the market. Taking proactive steps to evaluate for safety by working with a trusted certifying organization like UL Solutions will help companies enhance their brand reputation and build consumer trust.



7 protect your brand



There is nothing more valuable to a product manufacturer than their brand. You shouldn't be taking chances with your organization's most valued asset. It may be tempting to cut corners, to sneak by with the cheapest testing solutions, but that approach creates incalculable risks for your brand. The world's top electronics manufacturers have built the value of their brands on ensuring that their products meet the most stringent safety standards and that buyers can trust them fully. They integrate testing into every stage of their go-to-market plans. For them, testing and compliance aren't just box-checking exercises.

Being a leading global brand means understanding market conditions across the world and consistently delivering safe and compliant products while adhering to competitive launch schedules, regardless of the regulatory challenges. A commitment to holistic product testing strategies is one of the ways that successful brands create and maintain competitive differentiation.

In a study published in June 2019,
Edelman found that

81%

OF CONSUMERS

say their purchases depend on

BRAND TRUST.



Summary



Product testing in an increasingly dynamic technology market should be part of your strategic product and go-to-market planning. If testing approaches and expertise aren't central to your thinking, you're not only putting your brand and your market share at risk, you're also missing out on potential opportunities.

The world's smartest companies don't treat testing as a peripheral part of the product development process, they put it at the core of their road map, building

deep, ongoing relationships with testing partners who can deliver expertise and knowledge around the world.

A key ingredient of your strategy should involve building a testing and market-access partnership with a global leader that can help ensure timely, successful product launches that enable you to protect and grow your brand.



How UL Solutions can help

Global market access comes with its share of challenges but expanding into new markets doesn't have to be a daunting process. By identifying your goals as early as possible and working with those who have experience navigating the global market, you can begin to expand your reach and find success in new, promising locations.

Visit [UL.com/GMA](https://www.ul.com/GMA) to learn how UL Solutions can help you navigate regulatory complexity and accelerate speed to new markets.



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