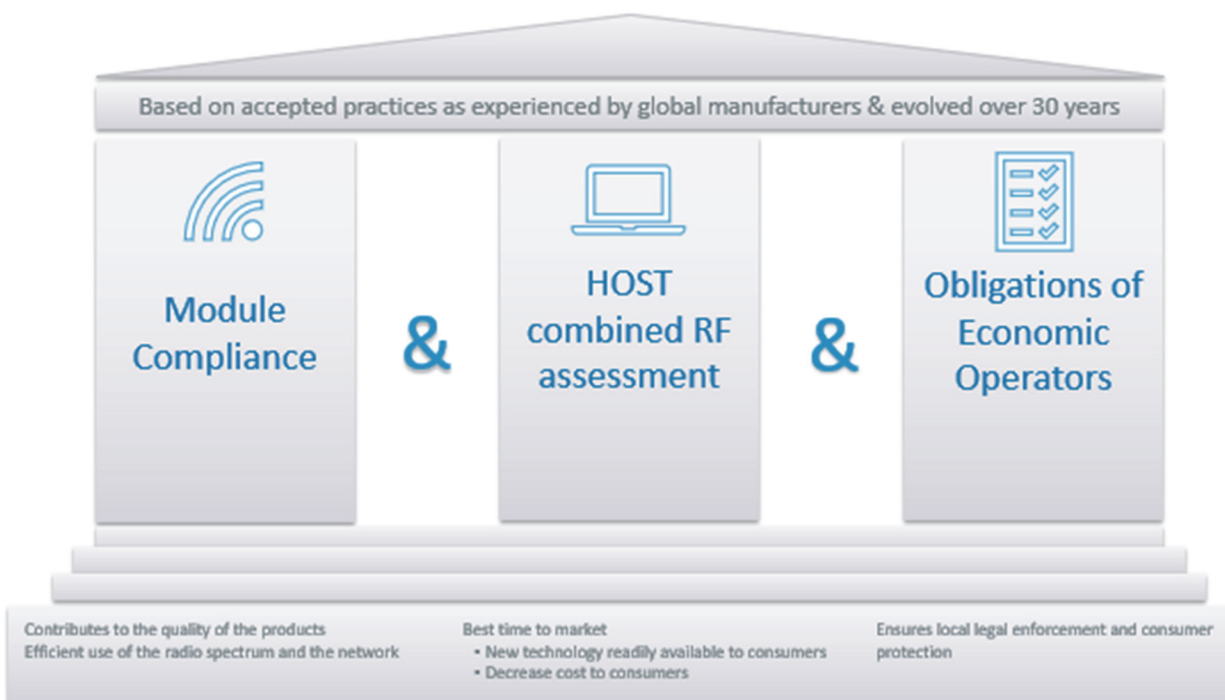# ITI Position Paper: Advantages of Modular Approvals in Conformity Assessment of Telecommunications Equipment

## What is Modular Approval?

Modular approval is limited to a radio module that is a tangible, clearly delineated device that is typically tested in a stand-alone configuration. Once modular approval has been obtained, the radio module can be installed into host systems following the integration requirements without having to obtain new authorization/certification. A host product is still required to comply with all other applicable equipment requirements when the module is installed. A modular certification reduces the radio testing and equipment homologation procedures associated with the host but does not present any conclusions about the host system. Modular approval has been a technically proven process and has a 30-year track record of effectiveness throughout the world.

As illustrated, utilizing a three-tiered approach for conformity assessments ensures that products are in compliance with technical regulations while maintaining accountability to the manufacturers of both the radio module and the host product. Several elements of the radio module testing and certification ensure consumer protection and increase regulatory assurance. Integration instructions that are provided by the module manufacturer to the system integrator specify installation, antenna type and gain to be used, and operating conditions necessary for compliance. Radio frequency (RF) shielding ensures that the module does not have to rely upon the shielding provided by the host device into which it is installed and reduces RF coupling onto the host system board. Power supply regulation ensures that the module will comply with the requirements regardless of the design of the power supplying circuitry in the host device into which the module is installed.



Based on accepted practices as experienced by global manufacturers & evolved over 30 years

**Module Compliance** & **HOST combined RF assessment** & **Obligations of Economic Operators**

Contributes to the quality of the products
Efficient use of the radio spectrum and the network

Best time to market
- New technology readily available to consumers
- Decrease cost to consumers

Ensures local legal enforcement and consumer protection

## What are the Benefits of Modular Approval?

Modular approval benefits consumers and businesses technology users because it can help reduce time to market, minimizing disruption in availability of products for consumers, both for critical and noncritical use. Meanwhile, consumer protection and legal enforcement options are ensured because of the economic operators' obligations. For example, the RF exposure assessment of the stand-alone module defines the restrictions that must be followed when the module is integrated into the final product to ensure compliance. If the restrictions cannot be followed a re-evaluation is required. Economic operators provide user manuals, certifications, product labelling/e-labeling, packaging artwork, and a regulatory notice to ensure that consumers and regulators are fully aware of the module and host system compliance.

Regulator workloads are made more efficient by:

- Reducing the need for increased lab capacity for module and host/end-product redundant RF testing
- Reducing workload due to expanded scope of products including IoT devices
- Reducing the need for larger storage space due to expanded scope of devices
- Reducing the need for host/end-product specific software/firmware tools for testing
- Reducing unintended delays in testing and homologation throughput time.

Finally, modular approval can help manufacturers to reduce costs, save time, and establish a standard radio interface across multiple host devices.

## Recommendations for Regulators

ITI strongly recommends that countries maintain or incorporate modular approval into their regulations to achieve the goals of their telecommunications equipment conformity assessment schemes. Modular approval not only creates efficiencies for regulators, but it also ensures consumer protection and legal enforcement assurance. In addition, it maintains efficient use of the radio spectrum and the network. Consumers benefit with reduced cost and improved time to market with the latest technologies. ITI is available to provide presentations to regulators and government officials who wish to learn more about incorporating modular approval into their telecom conformity assessment schemes.

*The Information Technology Industry Council (ITI) is the premier global advocate for technology, representing the world's most innovative companies. Founded in 1916, ITI is an international trade association with a team of professionals on four continents. We promote public policies and industry standards that advance competition and innovation worldwide. Our diverse membership and expert staff provide policymakers the broadest perspective and thought leadership from technology, hardware, software, services, and related industries.*

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