

NAME :	Radoslaw Szewczyk	GROUP REF. :	A2
COUNTRY :	Poland	PREF. SUBJECT :	PS3
REGISTRATION NUMBER :	5024	QUESTION N° :	Q 3.2

---

### Question 3.2

How are innovative ideas and/or processes incorporated in technical specifications, both for short-term and long-term perspectives? Should innovation be driven more by users' demands or by manufacturers' proposals?

### Answer

From the perspective of material developer and eventually solution provider it seems the innovation is typically driven by the manufacturers. They research for innovation to become competitive and spend time, money and effort for that. The material solutions, components and eventually design solutions must be then integrated into the transformer design and offered to the user. User can then select from multiple design options on what is the best for the addressing the existing needs.

It may happen that certain solutions developed are not becoming popular enough and innovation is discontinued in that area.

It happens that individual solutions are not valid when not combined with other innovations. Then, it is critical for proper synergy between the innovative approaches. For example, if two or three different innovative solutions would give benefit but only together, the manufacturer or end user must combine them for proper evaluation of the benefits. Otherwise, no benefit will be properly seen.

Sometimes, this proper evaluation may require multiple steps/players in a value chain of materials, components, OEM, system integrator, finally end user, to see the benefits. Individual players may not be able to reach through all these steps in the value chain and prove the value for the solution or solutions.

It may happen that some solutions might be attractive but there is not enough existing reference at the industry that would make the users confident enough in accepting the new innovative solution. Then, small scale prototyping is critical for step-by-step acceptance of the idea.

Sometimes, the standards are missing that could ensure the users that the solution is proven and well accepted at other users. This is especially difficult item, because the standard for certain solutions cannot be developed without some experience existing at the industry. Hence, applicability of certain solution will only be limited to those who are confident enough in their knowledge that they do not have to rely on the standards developed by the broader community of standardization.

Finally, the users may have special needs driven by specific new applications and may drive the demand for specific innovation. Those might also be driven by regulators (e.g. losses, transportation limits) or environmental restrictions (noise levels, sustainability, etc.). Then, solution providers must adjust to new demands.