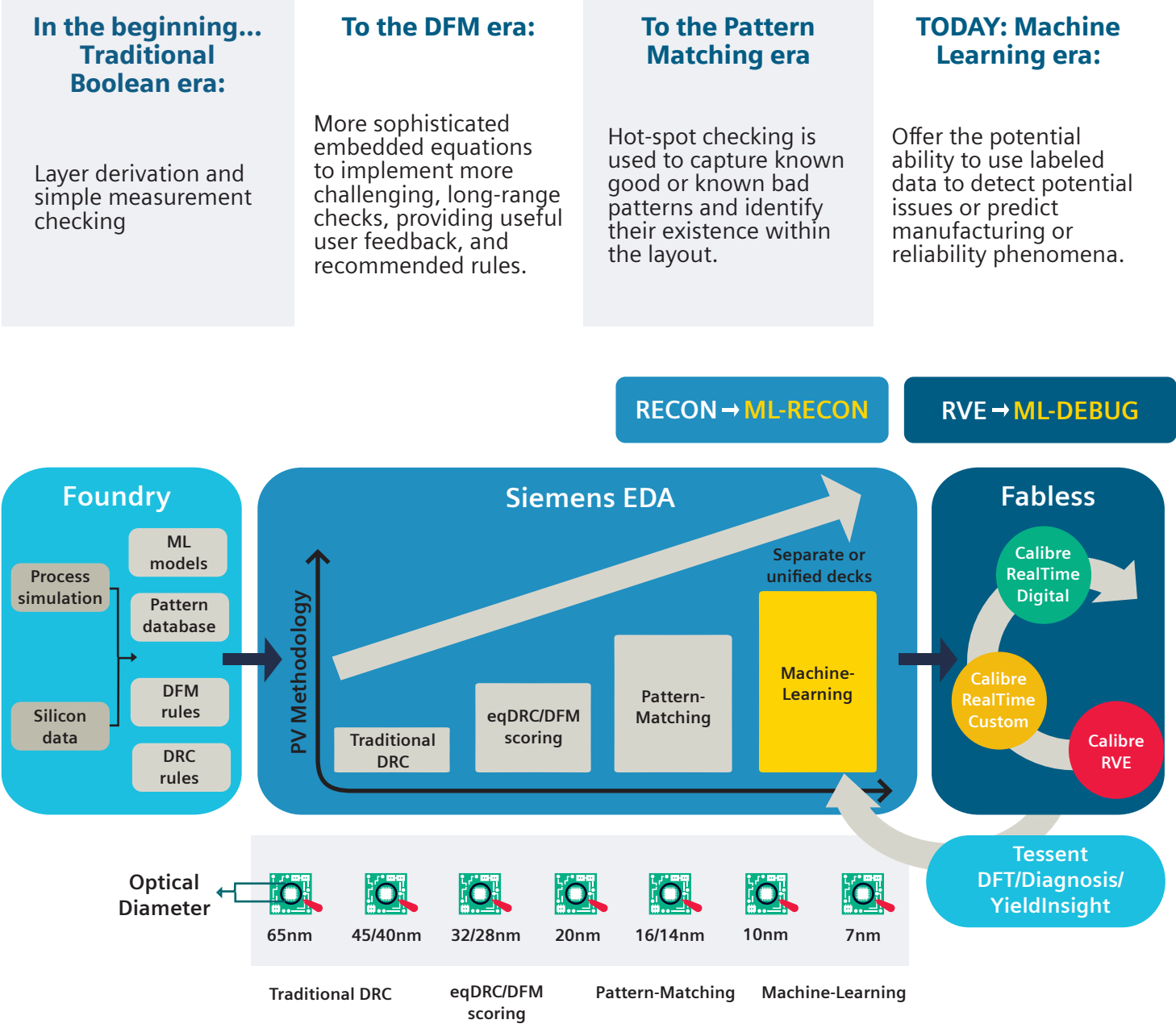


The evolution of machine learning in the physical design and verification of semiconductor packages

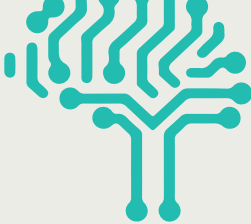
How has physical verification evolved at Siemens?



How does machine learning leverage artificial intelligence?

FACT: Forms of AI have always been used in physical verification

The rules and heuristics traditionally use, capture and apply human knowledge of manufacturing weaknesses and proper layout analysis. Computation models and patterns are more elaborate forms of capturing human knowledge for layout analysis.



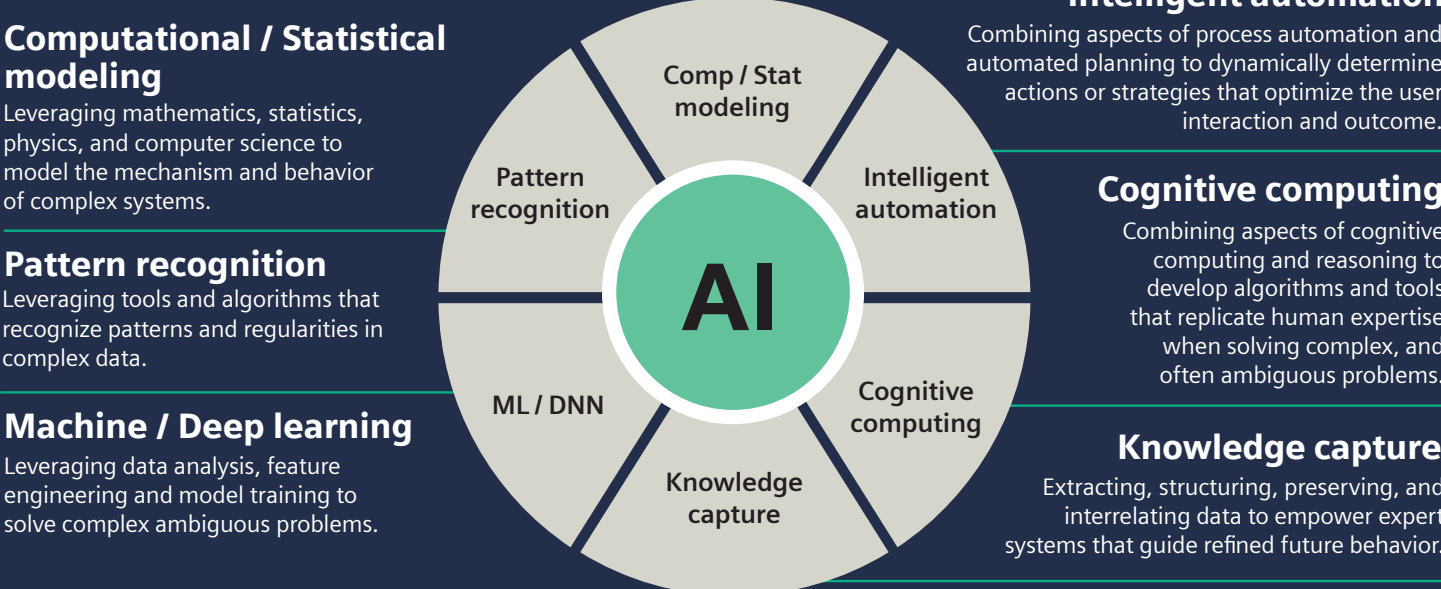


Machine learning **is an additional approach**, bringing new techniques for capturing and emulating human knowledge of layout.

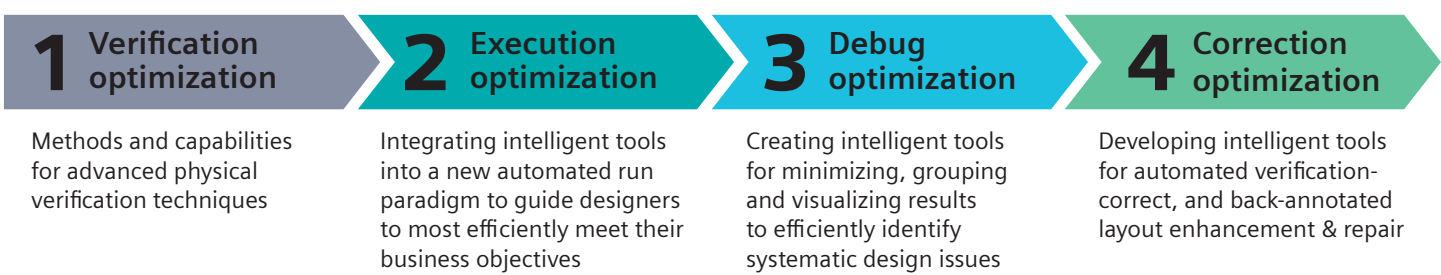
Each method **has its advantages and disadvantages** depending on the specific application and challenge.

The **best technique depends** on how readily the issue can be defined, what sorts of data are available, requirements for precision, etc.

There is no expectation that everything we do today will or can be replaced by machine learning

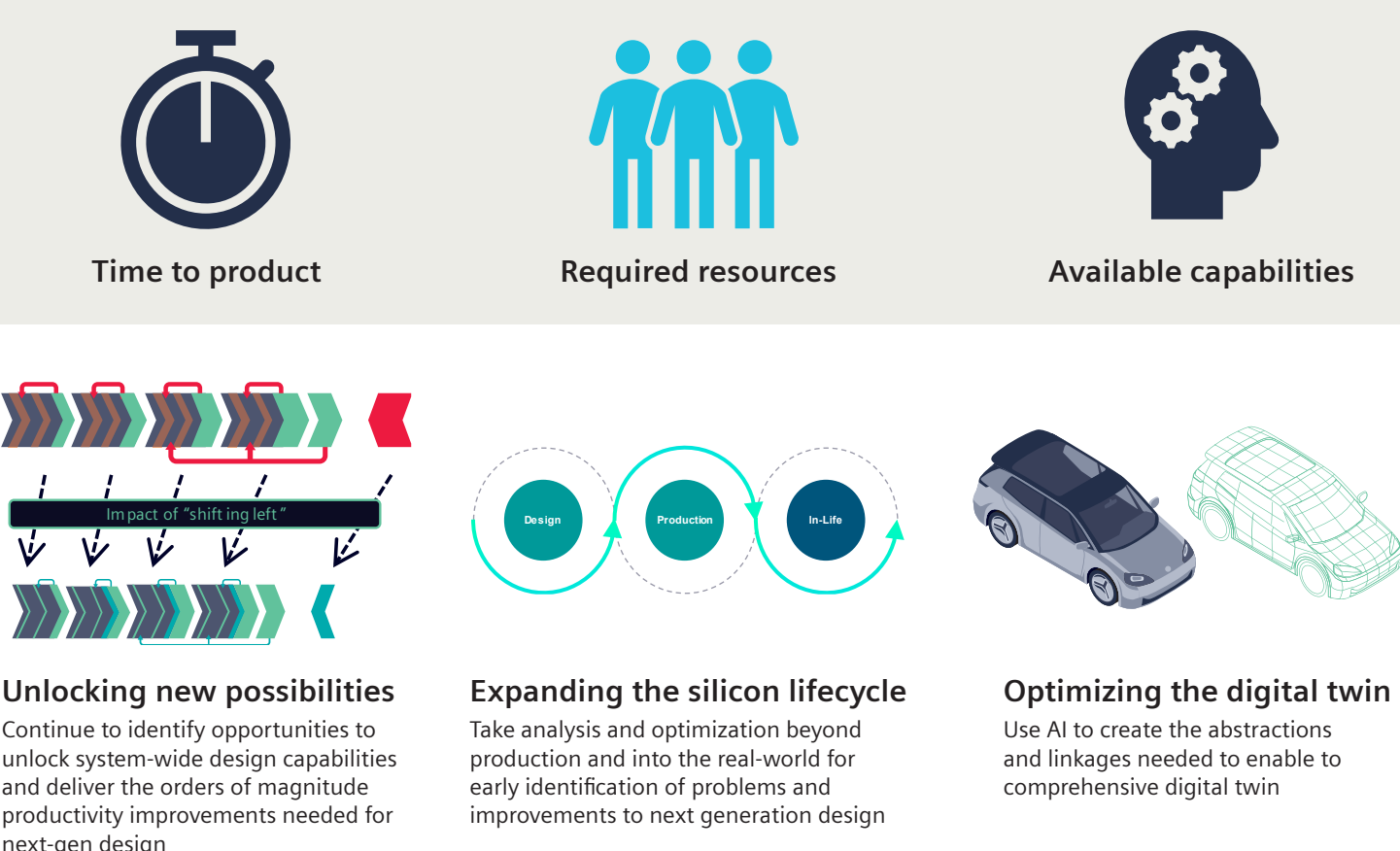


What are the key experiences that a designer deals with while doing layout verification?



Siemens is actively engaging the entire umbrella of AI tools to improve the experience of checking complex phenomena, the ease of use and performance of executing those checks, the effort required to interpret the results of the checks and the guidance and automation of correcting the identified problems.

AI is changing every aspect of semiconductor-enabled systems design



What's next?

Discover how Siemens continues to unlock all the possibilities presented by AI and expand its infusion of AI in our EDA solutions

[Learn more](#)