

CADEC+ is a **Knowledge Based Engineering (KBE)** Tool for machinery / equipment manufacturing companies.

CADEC+ has a **Windows-Friendly Interface** and it integrates with CAD when needed. It can be used independent of CAD.

The objective of CADEC+ is to help **Senior designers / Technocrats** Capture their product configuration logic with in-depth integration of drawing, manufacturing, costing rules.

Once configured by senior designers, the **Applications can be used by juniors** in design, sales, operations teams to convert inquiries, orders into proposals, design documentation.

CADEC+ is a **Programming-less** Tool to capture rules, logic, formats to configure separate applications for each product family.

*We are living in a world of competition and increasing complexity. Every company is trying to remove non-value adding activities, or automating them. **Design is one such activity which has increasing complexity because of competitive business scenario.***

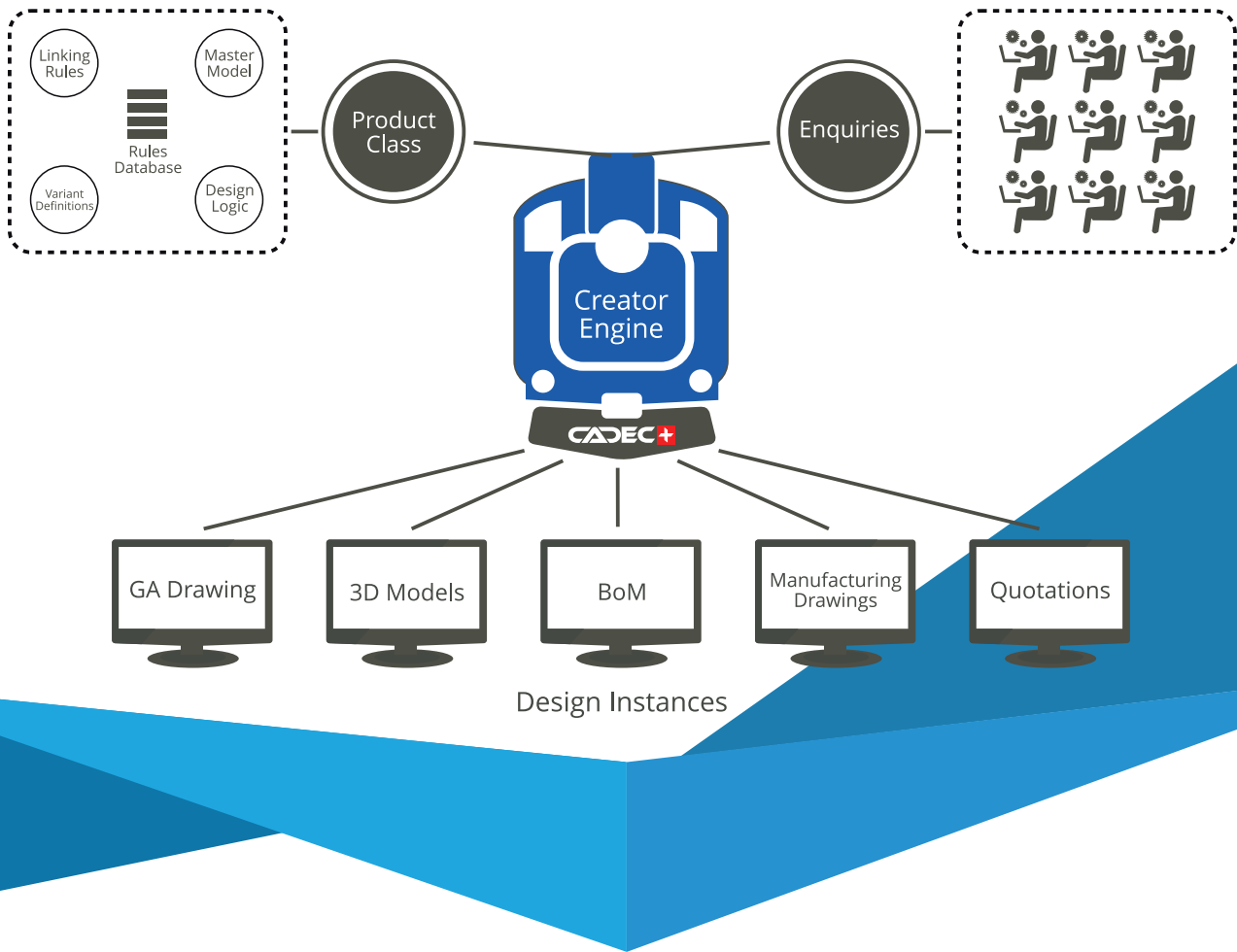
*Designers need to think about cost, manufacturability, quality while making any design changes. It needs substantial **domain expertise** (knowledge and experience in same industry and company).*

*But how much time of domain experts goes in really evaluating important decisions and doing R&D? Unfortunately very less. Because majority of time goes in doing routine things like calculations, referring to standards, creating models / drawings, creating excel sheets, etc. And since design is a complex / company-specific process, **there is no ERP for automating routine design activities.... till now.***

**Mark Design Solutions Pvt Ltd** has been doing R&D, development, implementations in hundreds of companies for past 18 years and offers CADEC+ solution for this challenge. **Domain experts can define their own logic, models, formats. They can configure applications for specific product design.** With this, the knowledge is captured and design applications can be created in few weeks for any complex product line.

Once the application is configured and tested, the **design process can be de-skilled.** So junior designers / officers can create designs. And domain experts can be free for more innovative / engineering decision making activities.

Configurator applications help in de-mystifying design process. Once logic is documented and implemented, it can be refined. **All concerned persons start using same logic. Product variations and strengths can be better leveraged** by sales. Procurement and production teams can align better with changing production plans. Product development goals can be optimized.



### KBE Process :

- Identify Classifications / Shape variations
- Define design logic
- Create master model of product family
- Capture model geometry
- Link design variables with model components and parameters
- Ready to create designs on the fly

### Salient Features of CADEC +

- Integration with SolidWorks and MS-Office
- Variable based design calculation logic
- Components and features combination logic
- Drawing views arrangement
- Technical quotations
- Formulae / Lookup for design calculations

### Mechanical Objects in Design Automation :

- 3D CAD Modeling is very similar to software programming
- Components can be re-used
- Majority of the components are re-usable
- Components can be linked, or embedded
- Linking helps in easy re-use, but needs generalized components
- You can change component parameters
- New Design Objects can be created using Master Class & Instance Specifications

### Why CADEC + & Solidworks? :

- CADEC + gets work done from SolidWorks.
- SolidWorks design tables, configurations and equations are person-dependent. To make SolidWorks person-independent, you need either programming or programming-less KBE (CADEC +).
- When you capture design process in CADEC +, you can make better use of SolidWorks for either innovative design or for 3D / 2D drafting.

