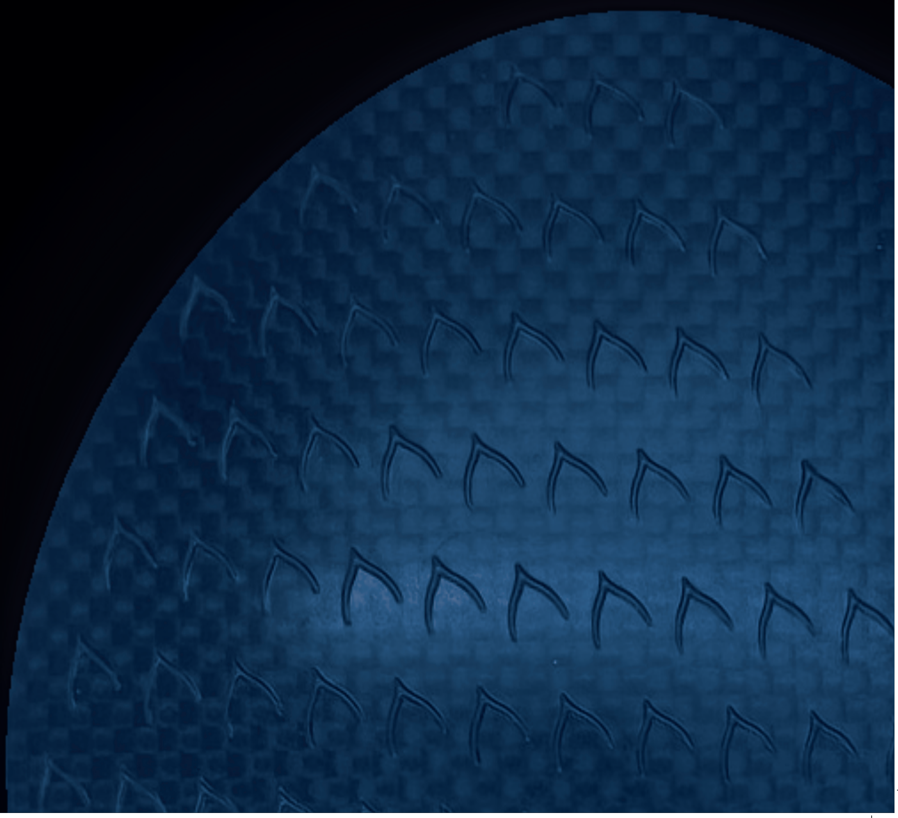
COREX

Engineering **Integration.**

Systems before materials.

Collaboration before transaction.

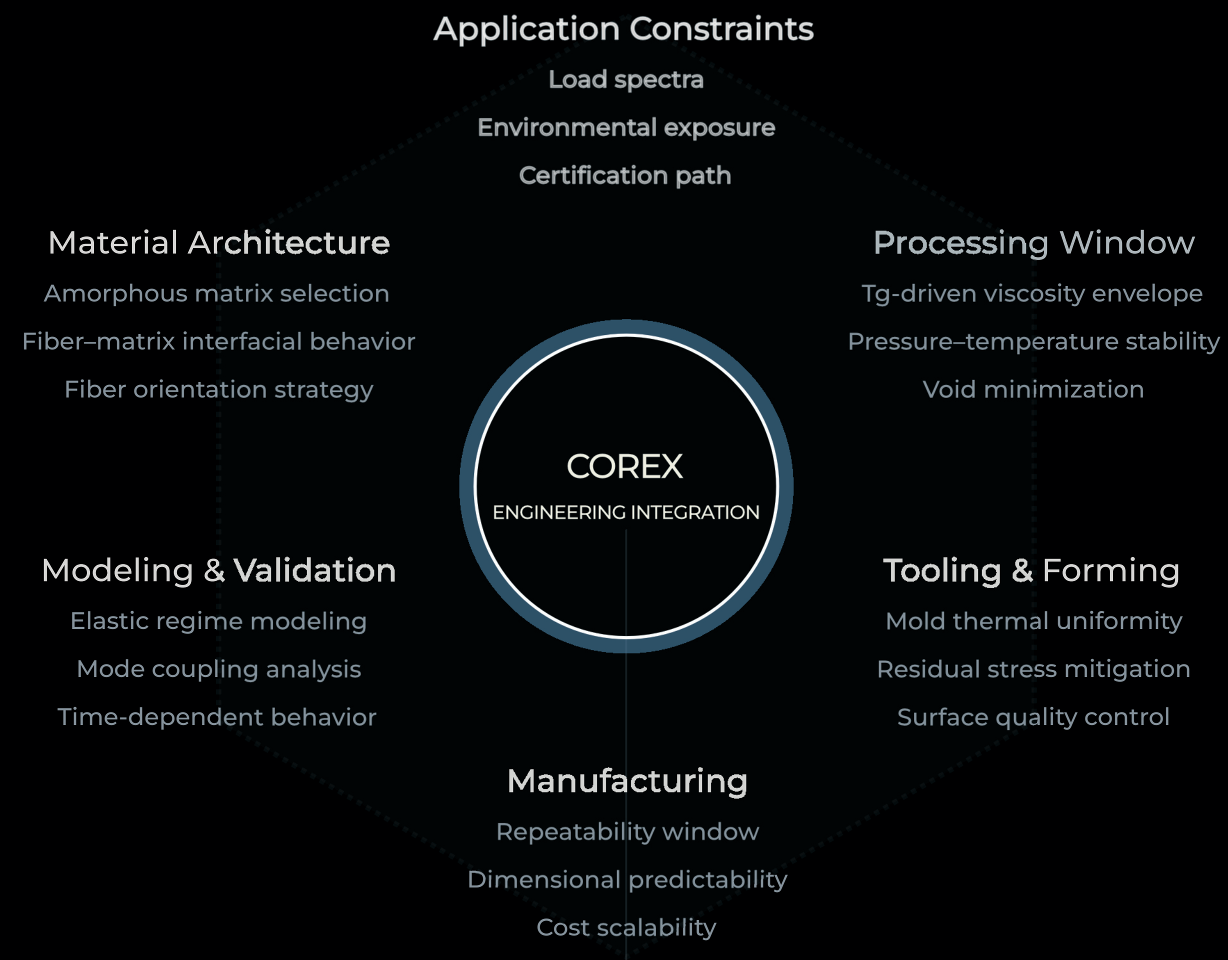


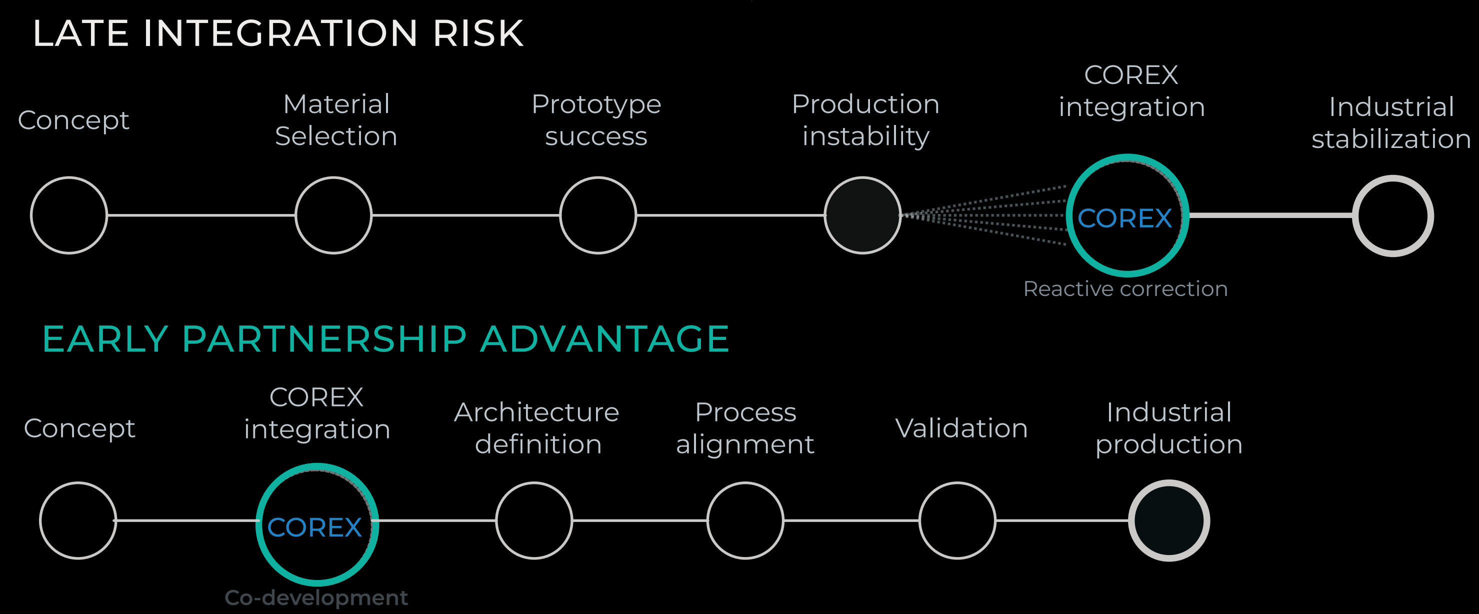
THE DEVELOPMENT REALITY

Innovation breaks at the interfaces.

Composite programs rarely fail because of material performance.

They fail at the interfaces between architecture, process, and production reality.





Integration timing defines project complexity.

MATERIAL & ARCHITECTURE PLATFORM

ENGINEERED AMORPHOUS CFRTP SYSTEMS

TPU	PC	PSU	PPSU	PES	PEI
Thermoplastic Polyurethane	Polycarbonate	Polysulfone	Polyphenylsufone	Polyethersulfone	Polyetherimide
High flexibility	Impact tolerance	Thermal stability	Chemical resistance	Dimensional stability	High Tg structural matrix
Damage tolerance	Process robustness	Hydrolysis resistance	Sterilization durability	Elevated temperature	Intrinsic flame resistance
Elastomeric behavior	Tg ≈ 148°C	Tg ≈ 187°C	Tg ≈ 220°C	Tg ≈ 225°C	Tg ≈ 217°C

Continuous Reinforcement Architectures

- Unidirectional tapes (tailored FAW and FVF)
- Woven fabrics
- Multiaxial / NCF structures
- Tailored laminate stacks
- Hybrid carbon / glass architectures

Architecture defined by load path and forming constraints.

Engineered Delivery Forms

- Consolidated laminate sheets
- Chopped UD charge materials
- Reprocessed off-trim feedstock
- Compression molding charges
- Near-net consolidated profiles
- UD structural profiles

Reducing Complexity at the Molecular Level.

Composite performance is often defined by strength or modulus.

In industrial reality, successful integration depends on stability rather than peak properties.

Semi-crystalline systems evolve during processing.

Crystallization develops as temperature, pressure, and cooling conditions change, introducing additional microstructural variability into the material response.

Each phase transition increases sensitivity to processing conditions and expands the number of parameters that must be controlled during manufacturing.

Amorphous matrices reduce this source of variability.

Without crystallization kinetics, the material remains single-phase throughout processing, reducing sensitivity to thermal history and forming conditions.

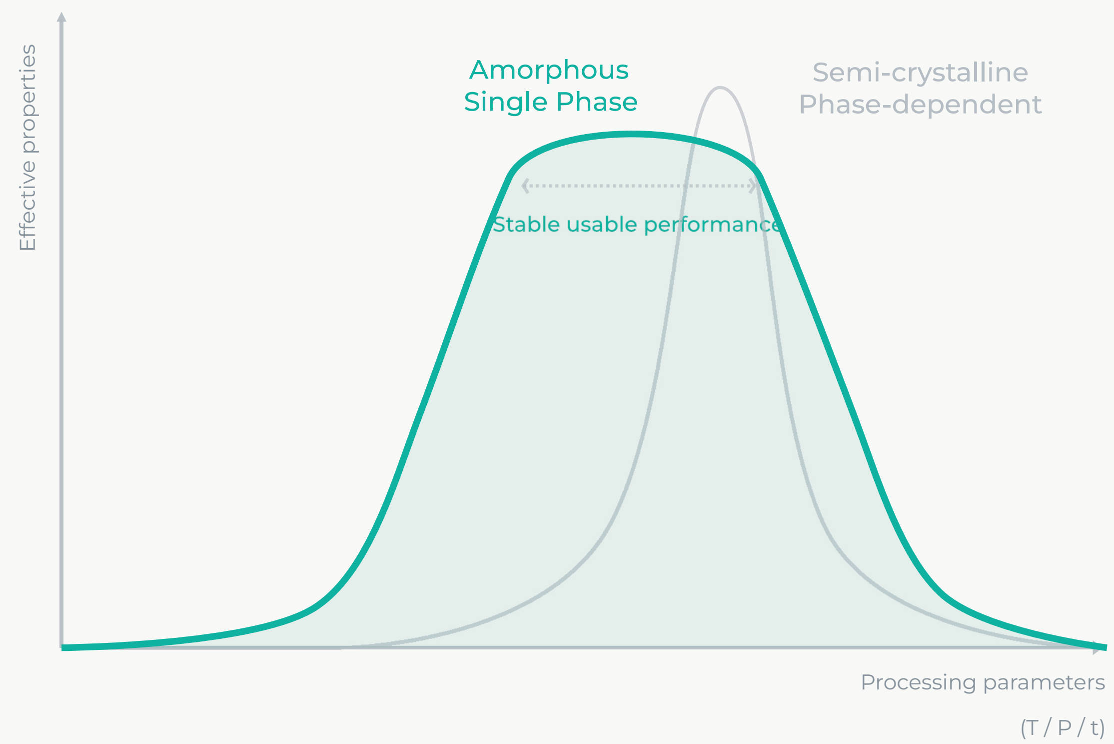
By removing phase evolution, molecular behavior becomes predictable, enabling stable performance across industrial processing variation.

Integration performance begins with molecular stability.

Wider forming temperature window

Predictable dimensional response

Reduced process sensitivity



Amorphous systems prioritize processing stability over peak material properties.

Amorphous systems maintain stable performance across industrial processing variation.

COREX

Integration is not a product.
It is a process of alignment.

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