

## Whole process Design

Empirical  
- Recipe Dev  
- Conditions

Batch  
Multiphase

*systems*

Flow

Exp.Design

## Development

### Recipe

- Reaction
- Work up

*operations*

### Unit operations

- Dist
- Cryst
- Extract
- Concentrate
- Reaction

### Scale up Reactor

Process  
Intensification

*components*

*dynamics*

Control,  
fluid flow,  
Process models  
Predictive scale up  
HT MT

Process Safety  
Eco<sup>2</sup> Efficiency  
Quality

## POC

## RXN Eng

*Fundamental understanding*

Multi  
Scale

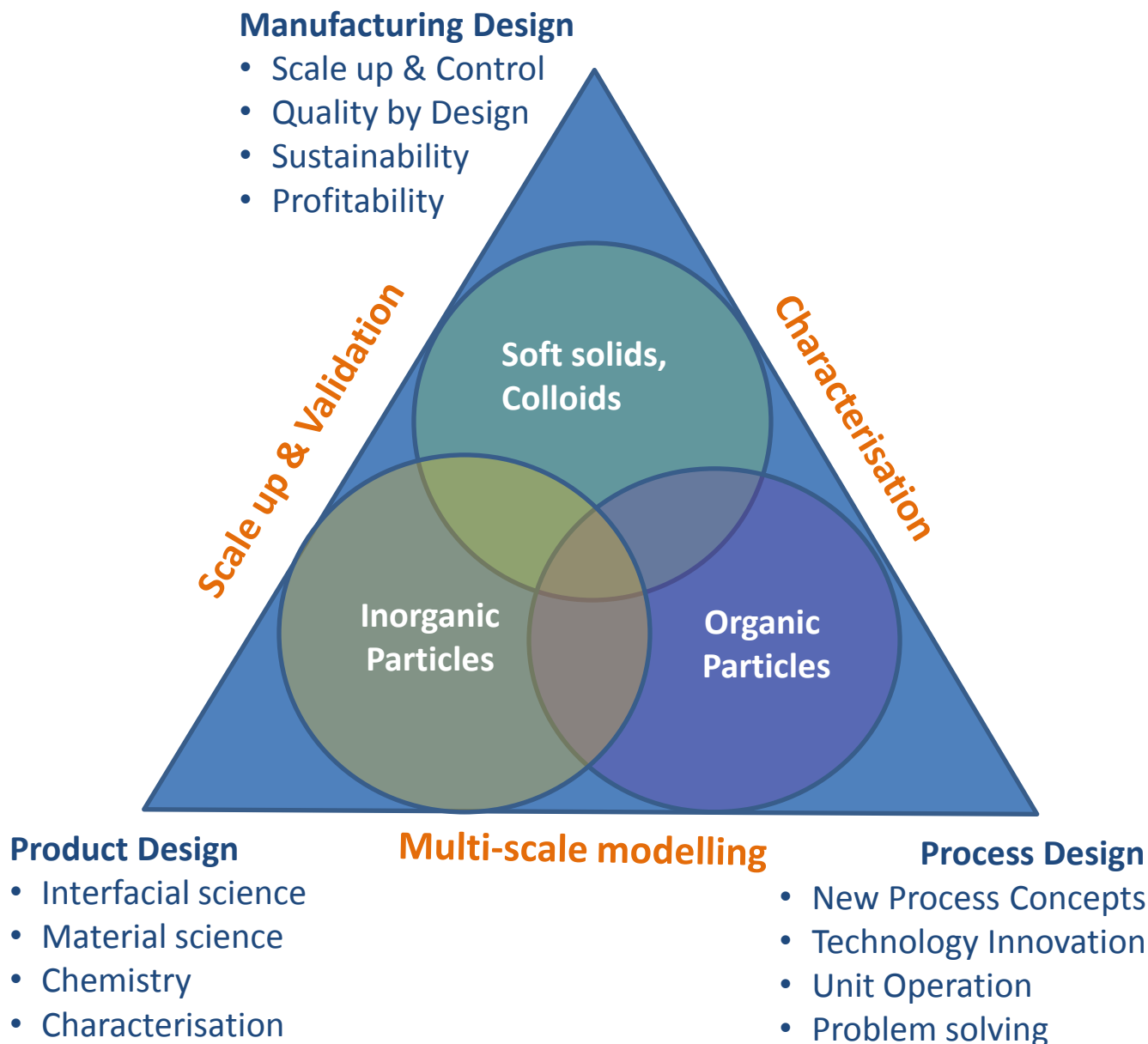
- kinetics
- Mechanisms
- Phys Props

Log P  
pKa

*“Fundamental understanding of the operation of components or systems and their dynamics”*

# CDT in Complex Particle-Products Manufacture

*Linking particle-product design to Manufacture*





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