



Robert Nicol

Technical Expertise:

- Petrochemical Engineering
- LFM (Operations)
- Human Genome Project



Biochemical Systems – Metabolic Pathways

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Identify System Elements

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- Approach: Identify elements and relationships to reduce complexity
- Hard Problems:
 - Identify elements (genes, proteins, metabolites)
 - Relationships between elements (gene regulation, protein interaction)
 - Multi-Disciplinary Technology and Organizations
- Assumptions:
 - System entirely represented by elements and their interactions
 - Abstractions possible (engineering models can be built)
- Expertise:
 - Nearly every engineering and scientific domain
 - “Integrators” of technology, concepts, and people extremely valued
- Designs:
 - Life has elegant, efficient, robust solutions: models generally follow
 - Socio-Technical Systems supporting work highly flexible and agile