Improving the Quality and Quantity of Innovations: Moving from Lab to Market

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Background

- An erroneous assumption exists that the investment of public funds in research will result in commercial products in the marketplace.
- In fact, most research project outputs do not move to the marketplace.
- Market and business analyses are typically neglected at the front end of the research process, resulting in downstream barriers to commercialization.
- Technology transfer (TT) offices are too over-burdened to do early stage or preliminary analyses for all projects.
- Academic investigators are typically not trained or motivated to do the necessary analyses.

Potential Solutions

- Systems change is needed to provide adequate motivation.
  - University rewards systems must recognize the value of innovation outputs.
  - Funding agencies must change eval uation criteria to consider commercial potential in proposals.
- Training, operational models, and tools are needed by academic investigators.

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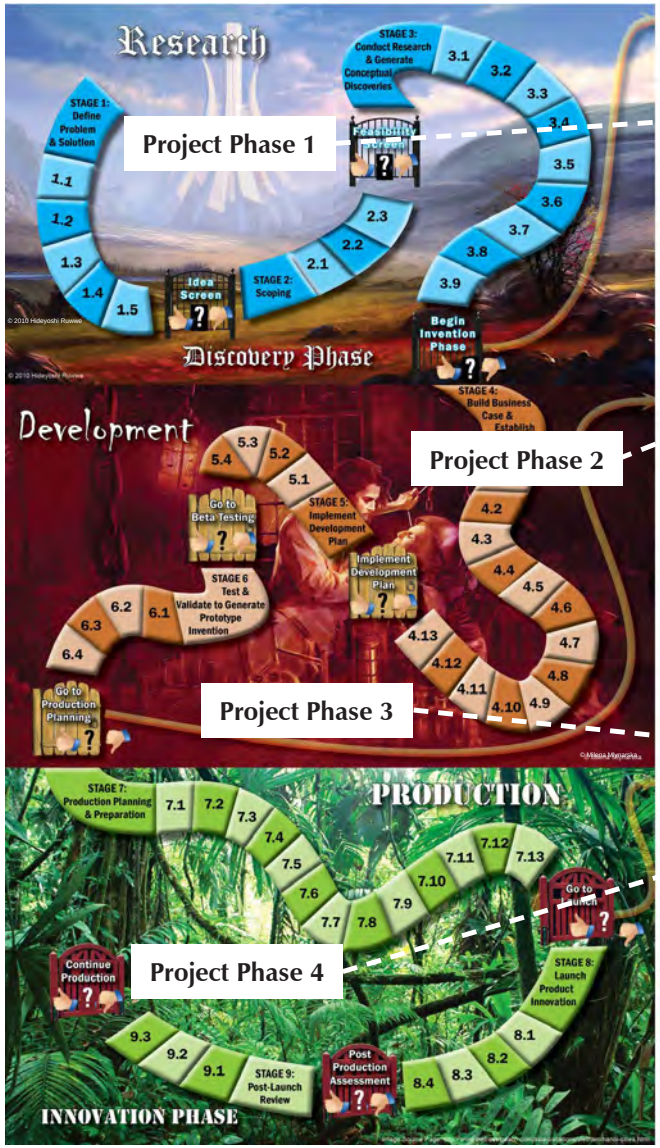
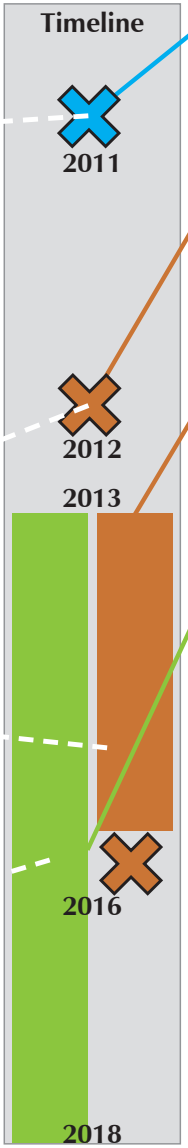
Methodology





Create Detailed Operational TT Model
- Need to Knowledge (NtK) Model established in 2011
- 9-Stage/9-Gate framework, 58 steps

Populate NtK Model Steps with Tools
- Toolbox launched in 2012
- 79 existing tools categorized into 5 competency groups

Develop TT Planning Template (TTPT)
- Streamlined interface to use NtK Model and Toolbox
- Currently under development
- Launch planned for 2016

Ongoing Evaluation from 2013 to 2018
- Track use of NtK Model and Toolbox
- Measure improvement in TT outcomes
- Use results to create systems change

Results and Implications

Providing training, models and tools to academic investigators
- Academic investigators have been using the NtK Model to shape successfully funded grant proposals, commercialization plans, and technology transfer plans.

Spurring systems change
- Socio-economic impacts resulting from publicly funded projects are expected to increase from use of the TTPT.
- Funding agencies (USDE and NSF) considering how the NtK can be integrated into their funding decisions.
- More research is needed to translate abstract concepts into operational models and frameworks for use by academic investigators, and to evaluate their effectiveness in practice.