MOTIVATION:

- Many high-quality technological discoveries from applied research do not make it to the marketplace.
  - Researchers may not know how to move their discoveries out of the lab.
  - Researchers may not understand how their role fits into the larger context of the new product development (NPD) process.
  - Lack of communication between stakeholders results in the generation of unwanted, unneeded, or impractical discoveries.

- Manufacturers are interested in new NPD practices; however, do not have the time to sift through thousands of resources.

RESEARCH OBJECTIVES:

- To create a user-friendly and action-oriented model (Need to Knowledge Model) detailing the steps involved in the New Product Development Process by:
  - Creating a stage/gate-style model linking the activities involved in generating research discoveries, prototype inventions, and product innovations.
  - Defining an opportunity to integrate a formal research process into new product development activities.
  - Integrating Knowledge to Action (KTA) concepts at key stages within the NPD process to facilitate communication between stakeholder groups.

- Identify, read, and classify current literature, which highlights issues relating to the steps within the Need to Knowledge Model.

- Extract important and actionable information (findings) from literature that substantiates the Need to Knowledge Model.

- Create a searchable database to house findings extracted from literature.

- Produce summaries of information and listings of tools that expedite the acquisition of new knowledge for busy professionals.

- Review and identify steps that are lacking substantiated findings.

PREDICTIONS:

- Practice Implications:
  - Researchers will be able to better understand where and how their work fits into the NPD process.
  - Communication and utilization of research will improve as practitioners implement KTA concepts in their work.
  - Manufacturers will gain a better appreciation of the value researchers can bring to the product development process.
  - Product development professionals will save time and money when making improvements to their NPD processes.

- Policy Implications:
  - Agencies granting funding for applied research activities can use the Need to Knowledge Model as benchmarking tool to ensure that they are funding viable development projects.

RESULTS:

- Number of Relevant Articles: 199
- Total number of findings: 788

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FUTURE WORK:

- Complete secondary analysis of findings for each stage and step
- Identify gaps
- Report findings
- Improve usability of knowledge base
- Initiate a second scoping review to gather information pertaining to gaps
- To add new research

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