

M&D Forum

# PATENTABLE IDEAS & R&D TAX CREDITS

Presented By:

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&

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# › Today's Presentation

- Barley Snyder and RKL is pleased to bring you today's joint presentation regarding product and process development initiatives in the manufacturing and automation industries.
- Specifically, we'll focus on when these efforts give rise to patentable content as well as tax reimbursements.
- Understanding where R&D begins and how best to document the process concurrently can not only lead to savings, but also help protect U.S. business' competitive advantage and intellectual property.
- We are excited to bring this unique perspective promoting the innovative initiatives of our clients, partners and community.

RESEARCH & DEVELOPMENT

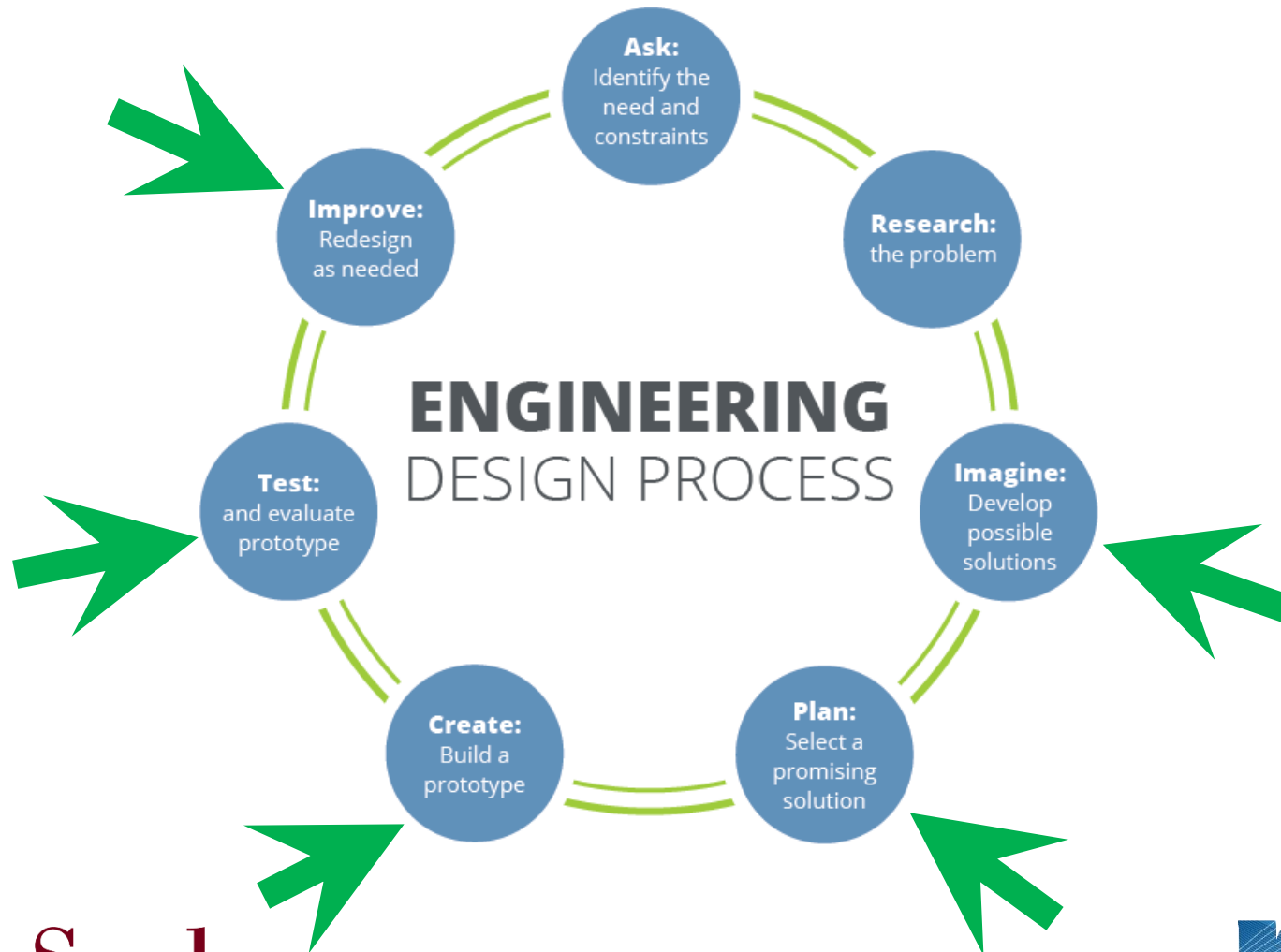
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# R&D CYCLE PATENT AND TAX CONSIDERATIONS

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## ➤ Patent Policy

- Promote innovation
- Protect inventions for a limited time
- Incentivize invention
- Encourage improvements

# » Origin of Patent Rights

Article I, Section [8] of the U.S. Constitution gives the power to the Congress “To promote the progress of science and useful arts, by securing for limited time to authors and inventors the exclusive rights to their respective writings and discoveries.”



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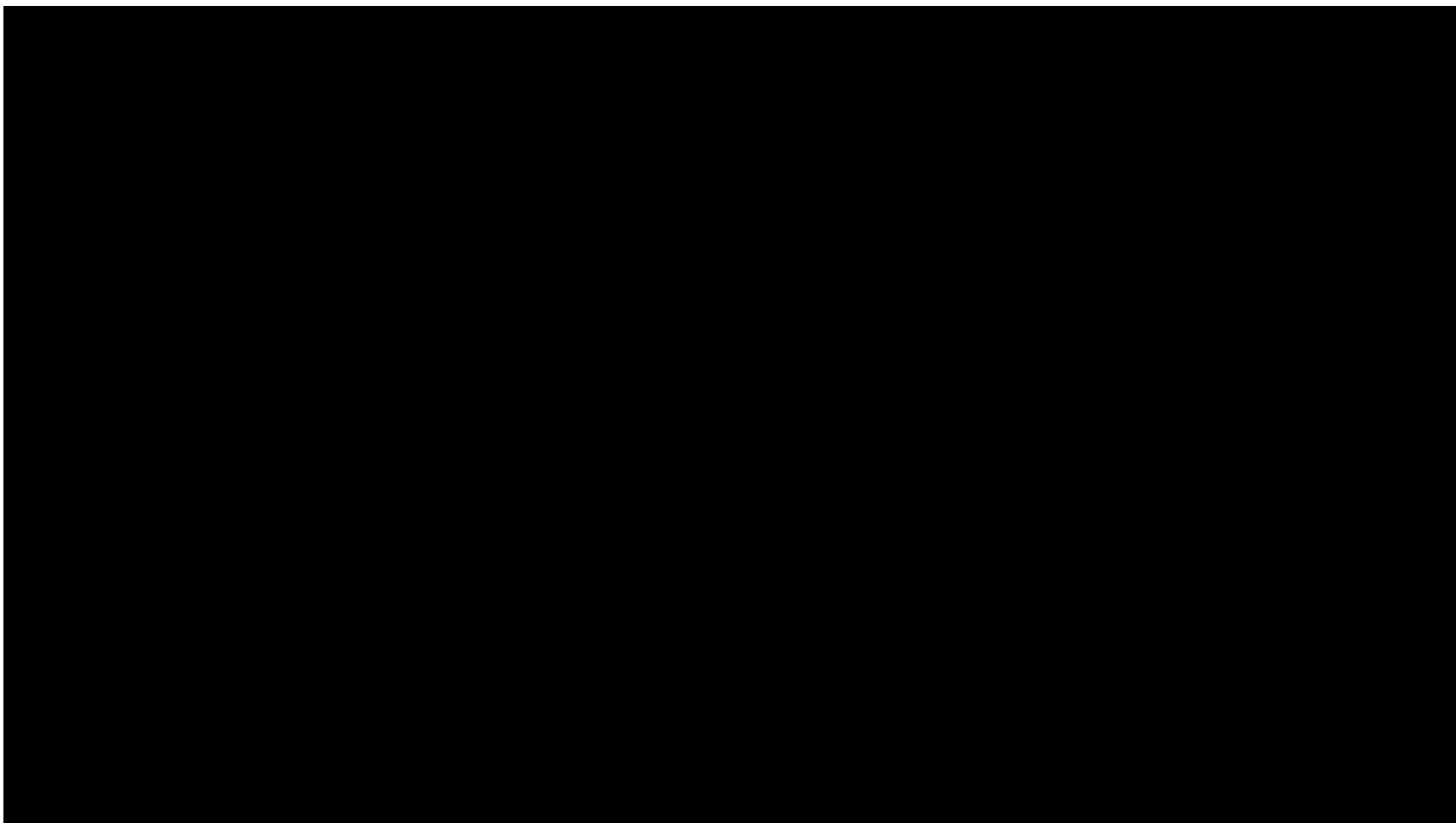
# › What is Patent Eligible?

- 35 U.S.C. Section 101:
  - Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent.

# Spotting Inventions in the Development Cycle

- Process
  - Automation
  - Chemical
  - Manufacturing
- Machine
  - Apparatus
  - Tool
  - Robotics
- Manufacture
  - Device
  - Article
- Composition of matter
  - Compound







## ➤ Patent Application/Tests

- Novel
  - First inventor to file
- Non-Obviousness
  - To one reasonably skilled in the art
- Useful

# › Invention/Patent Ownership Considerations

- Contract Development
  - Custom automation systems/controls/software
- Joint Development
- Who owns it?
- Who controls it?
- Can you license it?
- Who enforces it?

R&D TAX CREDITS

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# THE FOUR-PART TEST

# ➤ Introduction to the R&D Tax Credit

- The Research and Development (R&D) Tax Credit is available to taxpayers engaging in qualified research activities by providing tax credit equal to a percentage of certain eligible expenses called qualified research expenses (QREs).
- There are 3 main types of QREs:
  - Wage QREs
  - Supply QREs
  - Contractor QREs
- In order for an activity to be deemed qualified research, it must meet the following four-part test:
  - The “Section 174” test
  - The “Discovering New Information” test
  - The “Business Component” test
  - The “Process of Experimentation” test

# » The Four Part Test

- The “**Section 174**” test – the expense must be:
  - Incurred in connection to your trade or business;
  - Not chargeable to the capital account; and
  - Be considered an R&D cost in the experimental or laboratory sense.
- The “**Discovering New Information**” test:
  - The activities must be aimed at resolving/eliminating some uncertainty related to the design or improvement.
  - The “***Patent Safe-Harbor***” rule: an issued patent is conclusive evidence of this requirement.
- The “**Business Component**” test – substantially all of the research must be related to one of the following business component:
  - A Product, Process, or Technique;
  - An Invention or Formula; or
  - Computer software.
- The “**Process of Experimentation**” test – substantially of the research must be related to hard science principles and involve:
  - Experimentation in the traditional sense, but also...
  - An iterative process or a comparison of alternative solutions.

R&D TAX CREDITS

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# WHAT MAY QUALIFY

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# ➤ Potentially Qualified Activities

- New product development:
  - Products for sale
  - New production equipment
  - Prototype costs
  - New tools and dies
- Product improvements
  - Evolutionary not necessarily revolutionary
- Process development or improvements:
  - R&D processes
  - Manufacturing processes
- Software development

## ➤ Qualified Activities in Manufacturing

- Improvements or customizations to existing product designs
- Significant design changes implemented in response to a product defect or inconsistency
- Development of prototypes and models prior to commercial viability
- New proprietary products or updates
- New manufacturing process conceptualization, design, scale-up and testing/optimization
- Tool design, customizing inserts or fixtures and other articles of manufacturing

R&D AND PATENTS

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# DOCUMENTATION

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## » Documentation is Key

- The Service has focused on underlying documentation, or lack thereof, in recent years.
- Often, the amount and type of documentation can be the key to claiming the R&D Credit.
- Here are some tips for supporting documentation:
  - Tailored information specific to the activities claimed as research, not “boilerplate” descriptions.
  - Whenever possible, all activities should be documented in real time since this makes for the most accurate support.
    - If possible, each project should be documented as a separate business component.
  - Leverage documentation and reporting required by or implemented through your company’s existing protocols, procedures, and requirements.
    - Estimations can be used, but these too need backup.

# › What Type of Information Should be Documented?

- **Employee Labor:**

- Employee time tracking systems are helpful but the accuracy of the tracking and the level of detail should be addressed to meet R&D documentation purposes.
- This means that even salaried employees such as engineers, or executives may not be tracked.

- **Supplies Incurred:**

- Materials used/consumed on research projects should be identified.
- This includes the cost of prototype items as well as first run articles.
- Customized machinery should be documented and the 1<sup>st</sup> unit may be an eligible supply cost (where substantially all of the unit's design was subject to a process of experimentation).

- **Contracted Services:**

- Should be tracked by project not necessarily by invoice in order to tie these services to qualified research projects.
- This includes testing, analytics and material validation potentially.
- This also includes payments for outside research paid hourly without a firm price or not-to-exceed limitation.

## ➤ Documentation is Key

- Engineering notebooks
  - Physical or electronic
- Drawings (CAD)
- Inventorship
- Date of conception
- Assist patent drafting
  - Problem/solution definition
  - Alternate embodiments

SUBSTANTIATION

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# BEST PRACTICES

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# ➤ Documenting R&D and Patentable Ideas

- Documenting **Employee Labor**:
  - Staff timesheets
  - Meeting minutes
  - Trial logs or trial run reports
  - First article documentation
  - Models or simulations
  - Emails and correspondences
- Documenting **Experimental Supplies**:
  - Documentation of prototypes
  - Issue or failure reports
  - Specialty tool/fixture specifications
  - Scrap related to experimental products or processes
  - Photographs or video depictions
- Documenting **Contracted Services**:
  - Reports and deliverables
  - Billing reports/hour logs
  - Independent test results or presentations



## » Documentation Tips

- When to start:
  - Whenever a new/improved product or process is in its early stages, the documentation process should ideally be starting.
- Some easy-to-follow procedures:
  - As early on as possible, create a project name/number, and begin compiling information as its generated.
  - Label documents by project and business component.
    - For example, emails detailing or hashing out the project's parameters, conceptual design or functionality should be flagged.
  - Keeping revisions of the design as it evolves shows experimentation.

PROVIDING EXPERTISE

# R&D STUDIES AND PATENT SERVICES

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# Identifying, Quantifying and Supporting Qualified Expenses

- **Wage Analysis:**
  - RKL evaluates the R&D project “life cycle” from concept through development.
  - Identifies and ties information and documentation for the claim.
- **Supply Analysis:**
  - Throughout the course of the Study, RKL helps evaluate all aspects of the supply elements through a series of technical interviews and documentation review process.
- **Contractor Analysis:**
  - RKL examines the nature of the services being contracted and whether these services would be considered R&D on both sides of the transaction.
  - RKL examines the underlying contractual agreement in order to substantiation treatment as outside contracted R&D claimable costs.

# ➤ Identifying Patent Eligible Inventions and Protecting Them

- Follow the Development Cycle
  - Barley Snyder Patent Attorneys specializing in the client's technology work with engineers/inventors at every stage of development to:
    - Identify candidate processes, machines, articles of manufacture, compositions which may be patent eligible
    - Identify alternate solutions or design abounds which may have been rejected in the design process
    - Search for novelty
    - Search for product clearance
    - Plan for disclosures of the invention
    - Negotiate Joint Development Agreements
    - Secure ownership through Supplier Agreements

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