



Research &

Development Tax Credit

WIPFLI

Introduction



Chris Blaylock

Partner

847.941.0210

cblaylock@Wipfli.com



Cassie Goldberg

R&D Senior Accountant

952.548.3359

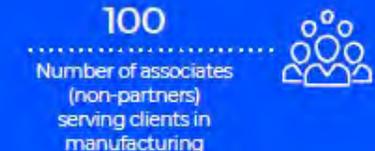
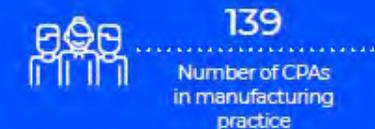
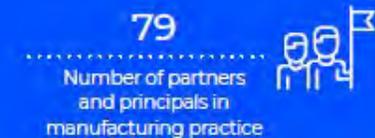
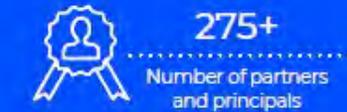
cgeniesse@Wipfli.com

The Wipfli Difference

Always advancing. Always progressing.
From curiosity to results. That's Wipfli.



Wipfli fast facts



Agenda

- How businesses benefit from the research credit
- Research Credit basics – 4-Part Test
- Expenses that qualify for the credit
- Examples of qualified activities
- Documentation Requirements
- Questions

R&D Credit Overview



IRC § 41 – R&D Credit Overview

- Purpose

- ▶ Incentivize Innovation
- ▶ Job creation
- ▶ Capital Investment

- Value/Benefits

- ▶ Reduces Income tax liability
- ▶ General Business credit (carryback 1 years, carryforward 20 years)
- ▶ Provides permanent book vs. tax difference
- ▶ State incentives – approx. 40 states currently offer a credit incentive

How can the R&D Credit Benefit your Company?

- Increase cash flow
 - ▶ Credits reduce tax liability dollar per dollar
- Available to all sizes of business and businesses in many different industries
- Rules are applicable for all open tax years
 - ▶ Allows returns to be amended to claim credit even if not previously claimed
- Businesses do not need to spend additional monies
- Deductions currently reducing taxable income are identified as Qualified Research Expenditures (QREs)

Tax Definition of R&D: The Four-Part Test

- New or improved business component
 - ▶ Development of a new or improved business component
 - Includes: Product, Process, Technique, Formula, Invention, or Computer Software
- Technological in nature
 - ▶ Relies on the principles of the hard sciences (physics, chemistry, biology, engineering, or computer science, etc.)
- Deductible under IRC §174 (eliminate uncertainty)
 - ▶ Capability – Can we do it?
 - ▶ Methodology – How do we do it?
 - ▶ Appropriate Design – What is the best design to meet our objectives?
- Process of experimentation
 - ▶ Formal or informal, evaluation of alternatives, systematic trial & error, testing and/or modeling
 - ▶ “Substantially all” activities must constitute elements of the process

Qualified Research Expenditures

- Wages (in-house labor)
 - ▶ Includes directly performing, supervising, or supporting
- Supplies
 - ▶ Not land or depreciable property
 - ▶ Must be **used** in the research activity – Focus of the experiment
- Contract Research
 - ▶ 65% of qualified amounts paid or incurred are included
 - ▶ Must have rights & risk for the research

R&D Credit Calculation Methods



Federal Calculation Methods – two options

1) Traditional Credit Method

- Federal credit of 20% of the lessor of:
 - ▶ The qualifying expenditures in excess of a base amount
 - Base amount = Average Annual Gross Receipts * fixed base %
 - Fixed base % - maximum of 16%
 - ▶ Or one-half of the qualifying expenditures
- 280c election eligible for originally filed returns
 - ▶ Reduced credit is 13% instead of 20% (credit is not added to income)

2) Alternative Simplified Credit (ASC)

- Federal credit of 14% of QRE over base amount
 - ▶ Base amount = half the average QREs for prior three years
- Benefits companies with high fixed base percentage, companies that have not increased research activities over time or where computation of the base period is impossible

ASC Calculation Example #1

- 2017- 2020 Qualified Expenditures (QREs)
 - ▶ 2017 - \$1,250,000
 - ▶ 2018 - \$1,300,000
 - ▶ 2019 - \$1,350,000
 - ▶ 2020 - \$1,400,000

2020 QREs	1,400,000
Less: Base	650,000
Eligible	750,000
Credit Rate	14%
Credit	105,000

ASC Calculation Example #2

- 2017- 2020 Qualified Expenditures (QREs)
 - ▶ 2017 - \$400,000
 - ▶ 2018 - \$400,000
 - ▶ 2019 - \$400,000
 - ▶ 2020 - \$400,000

2020 QREs	400,000
Less: Base	200,000
Eligible	200,000
Credit Rate	14%
Credit	28,000

Example Opportunities



Common Myths

- **The credit applies only to large businesses.**
 - ▶ False. There is no minimum amount of expense required to qualify for the credit.
- **We are a custom manufacturer and do not develop our own products; therefore, our customers may qualify for the credit, but we do not.**
 - ▶ False. The credit applies to both products and processes; often custom manufacturers are required to develop the processes that are capable of producing the part/product based on specifications provided by the customer.
- **We do not have a time tracking system in place; therefore, there is no way to determine our costs.**
 - ▶ False. The courts have ruled that a time tracking system is not required to claim the credit; rather, businesses must be able to connect employees' activities to the qualified projects.
- **If we claim the credit, we will be audited.**
 - ▶ False. The credit is one of many factors used to identify taxpayers for audit, but it is not the only factor.

Industries with Opportunity

- Manufacturing
 - ▶ Proprietary products
 - ▶ Custom/Contract manufacturing
- Software
 - ▶ New software applications
 - ▶ Revisions, enhancements, fixes to existing applications
- High-Tech/Bio-Tech
- Design/Build Contractors
 - ▶ Engineers or architects on staff
- Distribution
 - ▶ Software development
 - ▶ Process development

Examples of Qualified Activities - Manufacturing

- New/improved product design, features and/or functionality
- Engineering design services
- Development of Prototypes, molds or dies
- Tooling, jig, or holding, milling, finishing, end of arm tooling fixture development
- Software used in a production process
- New/improved manufacturing process
- Automation of manual or semi-auto processes
- Develop significant product cost reduction without reducing quality / functionality
- Development of specialized machinery and modifications to existing equipment
- Development of new technology (Patent safe harbor)
- Design/build contract manufacturing services
- Packaging development
- Testing method/application development
- Improve assembly/sub-assembly processes

Specifically Excluded Activities

- Research (including contract research) conducted outside the United States, Puerto Rico, or other U.S. possessions
- Research after commercial production:
 - ▶ Exception: may still qualify if related to process improvements
- Research where Taxpayer does not retain substantial rights (Funded research)
- Research related to management functions or techniques, surveys, routine data collection Market Research
- Adaptation of an existing product to a particular customer's requirement or need, without any uncertainty present
- Reverse engineering
- Research relating to style, taste, cosmetics, or seasonal design factors (aesthetics)
- Routine testing, quality control, or maintenance
 - ▶ Testing or inspection to determine whether particular units of materials or products conform to specified parameters is non-qualified activity (quality control).
 - ▶ Testing to determine if the design of a product or process is appropriate may be qualified activity (quality assurance).

Documentation Requirements



Documentation Requirements

- No specific documentation requirement exists in the code or regulation
- Must retain records in “sufficiently usable form and detail to substantiate that expenditures are eligible for the credit”
- Failure to keep records in any particular manner cannot serve as a basis for denying the credit
- Case law supports the use of estimates when underlying documentation supports those estimates
- Taxpayers are allowed to prepare documentation after the fact and claim the credit

Documentation Requirements

- Records must do the following:
 - ▶ Prove or help to prove the projects qualify
 - ▶ Connect the employees involved directly or indirectly to the project
 - ▶ Provide connection between the employees, the projects, and why the projects qualify
- Examples of records that can help support qualified activities have occurred
 - ▶ Project charter/approval
 - ▶ Purchase order; demonstrates what a customer wants developed
 - ▶ Initial concept designs
 - ▶ Design review meeting notes
 - ▶ E-mails discussing design issues
 - ▶ Test data; this is crucial
 - ▶ E-mails discussing test data/design changes because of test data
 - ▶ Design revisions
 - ▶ Final design
 - ▶ Design approval meeting

Best Practices



R&D Best Practices

1. Review your day-to-day activities. Do you engage in activities discussed today? If so, there is credit potential credit opportunity.
2. Don't self-assess. Schedule a meeting to discuss the R&D credit in more detail. You may be surprised at the dollars you are leaving on the table.
3. Documentation – Don't let the documentation requirements scare you off. Chances are there are documents maintained for other business reasons that can also substantiate the credits claimed.



Questions?

To start the conversation about your R&D Tax Credit options, contact:

Emily Lee, IMEC
elee@imec.org

WHAT IS I-SMART?

- A federally-funded program to support automation and robotics services for U.S. manufacturers.
- Provides manufacturers with access to MEP automation experts to:
 - Identify automation opportunities
 - Develop the business case for specific applications
 - Connect manufacturers with additional automation resources
 - Assist with preparing for automation deployments
 - Consult on post-deployment optimization
- Emphasis on helping manufacturers get “quick-wins” (fast payback)

WHAT CAN I-SMART DO FOR ME?

- Start with a free automation implementation evaluation
 - *Remote or on-site visit by MEP/industry experts*
 - *Evaluate suitability of potential applications*
 - *Determine business case for best option(s):*
 - Cost/savings
 - Return on investment and payback period
 - *Provide written report to company on findings*
- Identify options for solution providers, assist with RFPs



WHAT CAN I-SMART DO FOR ME?

- Provide pre-deployment assistance
 - *Help plant leaders prepare workers for automation*
 - *Assist with redesign of process using Lean*
- Offer post-deployment support
 - *Replicate success of “quick-wins”*
 - *Generate additional business cases*
 - *Help optimize process*



WHAT CAN I-SMART DO FOR ME?

- Typical Process

- Schedule date/time for site visit
- Complete pre-visit questionnaire
- Meet with key stakeholders
- Tour shop floor and gather information on potential applications
- Calculate financials
- Provide written report on findings

Application Information Form				Date: 7/31/18	
Company: ██████████		Location: ██████████, IN		Contact: ██████████	
Necessary Reach: Est URe 3 or 5		Line Identifier/Description: Deburr		Rating: (A) (B) (C) (X)	
Shifts: Currently 8hrs per day/5 days a week. Bottleneck:		Part Size: 5 springs for high volume	Part Weight: grams	Throughput/Cycle: 150-200 per hr	Pick multiples? possible
Automation Driver(s):		Considerations/Challenges:		Image/Notes:	
<input type="checkbox"/> Repetitive Motion Injury or other hazards <input type="checkbox"/> Ergonomics Improvement <input type="checkbox"/> Hiring difficulties <input type="checkbox"/> Retention/Turnover issues & training <input checked="" type="checkbox"/> Quality/Consistency issues <input checked="" type="checkbox"/> Labor costs <input type="checkbox"/> Other		<input type="checkbox"/> Bin pick <input type="checkbox"/> Dexterity <input type="checkbox"/> Visual inspection <input checked="" type="checkbox"/> Precision/Tolerance <input type="checkbox"/> Low % able to automate w/Robot <input type="checkbox"/> Complex grippers		<input type="checkbox"/> Environment <input type="checkbox"/> Reach <input checked="" type="checkbox"/> Push/Pull force <input type="checkbox"/> Changeover time <input checked="" type="checkbox"/> Ability to integrate	
					
Notes: <ul style="list-style-type: none"> • Integration Note – <ul style="list-style-type: none"> ○ 8 total grinding stations ○ Likely 2-4 stations at new facility ○ Could isolate parts to always have at same deburr station ○ Cart / Array Tray system to be developed • Pick parts out of an array <ul style="list-style-type: none"> ○ If in well for picking – 1/8" each - in well / grip / above • Likely pick by OD in center of part <ul style="list-style-type: none"> ○ Gripping force could be several hundreds of newtons due to strength of spring • Part deburred on leading & back edge – OD & ID – 2 orbital rotations each • Force Torque Sensor (embedded in e-Series) to apply constant force • Track part counts to determine changing/maintenance of bit <ul style="list-style-type: none"> ○ Currently avg 1000 parts per bit change • TBD if parts go back in same pick position vs. into tumbler tote 					

QUESTIONS? WANT MORE INFORMATION?

Illinois



Tim Maurer
tmaurer@imec.org

Indiana



Kyle Squillace
kbsquill@purdue.edu

Iowa



Shankar Srinivasan
srigshan@iastate.edu

GET TECH READY

2021 Illinois Advanced Manufacturing Virtual Summit

Presented by:   JOHN WOOD
COMMUNITY COLLEGE  IMA ILLINOIS
MANUFACTURERS'
ASSOCIATION

March 24 | 8:30am - 12:00pm

5 Sessions

- What is Industry 4.0?
- Reducing the Risk of Automation with Virtual Reality & Digital Twin Technology
- Industrial Internet of Things for Small and Mid-Sized Manufacturers
- Big Data and Analytics
- How Valued Workers Can Use Autonomous Mobile Robots to Improve Efficiency and Boost Productivity

Registration at <http://bit.ly/Get-Tech-Ready>



FRAME THE FUTURE.

2021 Conference on Enterprise Excellence



March 30 and 31 | 8:30am - 12:30pm

2 Keynote Speakers

- Tom Wujec | Fundamental Skills and Tools to Thrive in a World of Extreme Change
 - 6-time TED speaker, technology pioneer, design thinker
- Scott Steinberg | Leading Through Disruption and Future-Proofing Your Organization
 - Futurist and Business Strategist

16 Breakout Sessions

- Leadership
- Strategy
- Workforce
- Customer Engagement
- Operations

IMEC Awards for Excellence Celebration

FREE Registration at <https://imecexcellence2021.com>



UPCOMING TECH EVENTS

Date	Session	Presenter
April 6	PLAN FOR TECH: Identifying Your First (or Next) Robotic Automation Project Webinar	Matrix Automation
April 14	BUILD IT BETTER Additive Manufacturing Summit	IMEC Met-L-Flo EIGERlab
April 29	MORE WITH MORE: The Human Side of Automation Webinar	Fusion IMEC

Register at www.IMEC.org/Events/

UPCOMING EVENTS

Date	Session	Presenter
Mar 12, 16, 19, 23, and 26	INCREASE ONLINE SALES: Role for Manufacturers in the eCommerce Marketplace 6-Part Series	B2Btail partners
Mar 18	EXPAND YOUR REACH: Insider Ways To Use Facebook & LinkedIn to Increase Your Manufacturing Sales Webinar	Strategic & Creative Marketing
Mar 23	ADAPT AND IMPROVE: Learn to Apply Lean Six Sigma to Continually Improve Webinar	FKI Quality
Mar 25	DEVELOP YOUR LEADERS: Communicating for Leadership Success Workshop	Ashley Beaudoin, IMEC
Mar 25	KEEP IT RUNNING: Roadmap to Maintenance 4.0 Webinar	Jesse Brady, IMEC

Register at www.IMEC.org/Events/