

# Do's and Don'ts: Identifying Good Robot Projects Webinar

**\*\*\*Please mute your phones/mics\*\*\***



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**UNIVERSAL ROBOTS**





# I-SMART: Implementing Small Manufacturer Assistance with Robotic Technologies



*Are you Prepared?*



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

# QUESTIONS? WANT MORE INFORMATION?

Illinois



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# National Cybersecurity Awareness Month



## Date

Oct 8, 15, 22, 29 &  
Nov 5, 12

## I-SMART / Industry 4.0 Events

| Date    | Event   |
|---------|---|
| Sept 30 | Affordable Robots: Lease, Rent, and Reconditioned Options Webinar |
| Oct 23  | Robots 101: Putting Automation to Work                            |
| Oct 28  | The Case for Automation   |

Visit [www.IMEC.org/Events](http://www.IMEC.org/Events) to register





# OCTOBER IS MANUFACTURING MONTH!

## Igniting Careers in Manufacturing Webinar Series

| Date   | Event  |
|--------|--|
| Oct 6  | Manufacturing Leader Buzz Session: Workplace Health and Safety       |
| Oct 13 | Onboarding New Employees for Long-Term Success Webinar               |
| Oct 14 | Meeting OSHA Requirements in the Age of COVID-19 Webinar             |
| Oct 20 | The Financial Benefits of a Neurodiverse Environment                 |
| Oct 21 | Employee Investment to Increase Engagement and Retention Webinar     |
| Oct 27 | Manufacturing Leader Buzz Session: Grow, Groom and Nurture Your Team |
| Oct 28 | COVID-19, the Recession, and the Impact on Manufacturing             |

Visit [www.IMEC.org/Events](http://www.IMEC.org/Events) to register

