



Roundtable Discussion

Helping Iowa Manufacturers Seize the Opportunity

STEP 1

Welcome!

- Our purpose today:

To get input on how your company sees and intends to utilize technology to help Iowa understand how best to elevate and support our manufacturing industry

- Agenda:

1. Introductions
2. Industry 4.0 Open Discussion
3. Iowa's Manufacturing 4.0 Consortium
4. Incentives

STEP
2

Introductions

Hello

my name is

Name

Company

Industry

STEP 3

What are we talking about today?



<https://youtu.be/F06qB7mJX98>

- Industry (or Manufacturing) 4.0 is:
 - The fourth industrial revolution
 - 9 Technologies or Applications Working Together
 - Smart Manufacturing - Connected Supply Chains
 - Cyber Physical Systems (integration or interaction of physical equipment and software)



STEP 4

Which Group Sounds Like Your Company?

A.

Industry 4.0 is all new to our company

B.

Heard about Industry 4.0, haven't addressed it

C.

Planning to implement Industry 4.0 soon

D.

Done a few things but no real system yet

E.

Fully committed to implementing & investing in Industry 4.0

STEP 5

Let's Go Around the Wheel What are you doing related to...



Cybersecurity

- Protecting your networks, devices and data
- Ensures confidentiality, integrity and availability of information

What are you doing for cybersecurity?

Are you using internal employees or contracting outside your company to manage cybersecurity?

https://youtu.be/BOllm_BiPhE





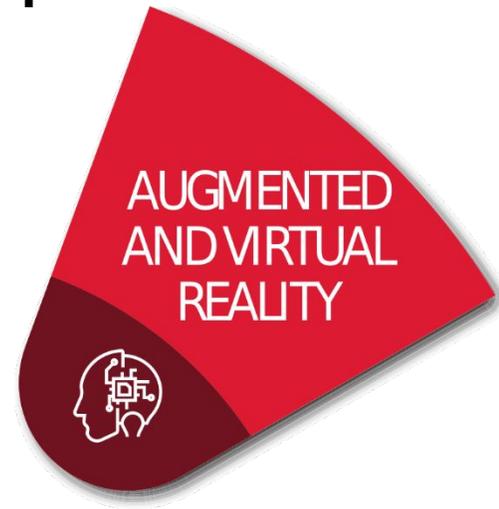
AR/VR

- **Augmented Reality (AR)** is a technology that superimposes a computer-generated image on a user's view of the real world
- **Virtual Reality (VR)** is a computer-generated simulation of a 3-D image or environment that can be interacted with in a seemingly real or physical way.

Are you using AR/VR in your testing, training, or product promotion?

Please Explain

<https://youtu.be/sxCq9RU-7iw>



Big Data

- Extremely large data sets that can be analyzed to reveal patterns, trends, and process improvements

Are you generating any data that you're not doing anything with?

<https://youtu.be/hibGmQhNsnk>

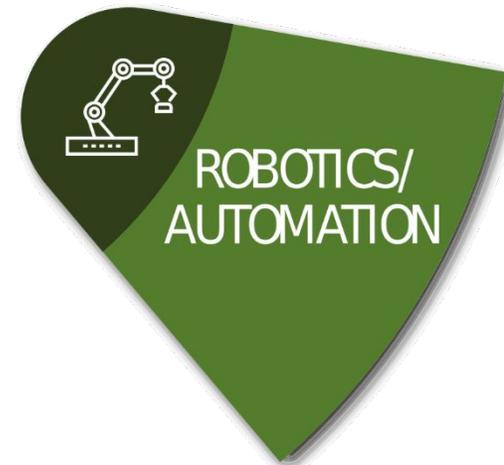




Robotics/Automation

- Automation includes a wide range of technologies that reduce human intervention in processes

What types of automation are currently used at your business?



<https://youtu.be/-8sIVeUoEY4>



Additive Manufacturing/3D Printing

- A computer controlled process that creates three dimensional objects by depositing materials, usually in layers

Do you have a 3D printer onsite that you are using?
What is it used for?

<https://youtu.be/oScnCeWA8NA>



ADDITIVE
MFG/3D
PRINTING



Simulation

- Simulation is computerized 3-D prototyping and testing, saving time and materials.
- Ideal for training employees and scenario planning

Are you using simulation in training, testing or prototyping?



SIMULATION

<https://youtu.be/LSQtmqqcNsE>

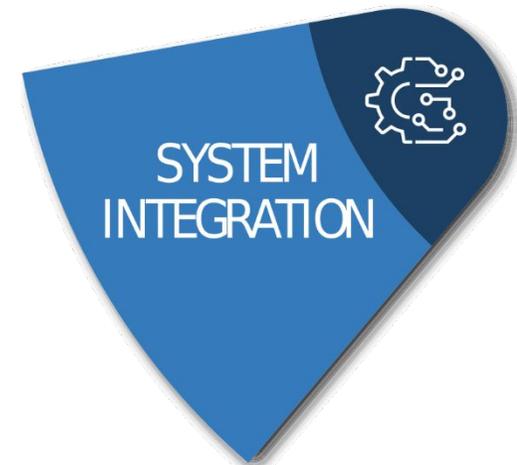


System Integration

- Utilizing software to enable the sharing of data up and down the supply chain or across the factory floor

Are you using technology to interact with your suppliers or customers?

https://youtu.be/cM-5oq_ivjw





Cloud Computing

- Using a network of remote servers hosted on the internet to store, manage and process data, rather than a local server or a personal computer.

Do you store your data in the cloud or an in-house server or both?

<https://youtu.be/k5P4ti1zG2M>

CLOUD
COMPUTING





Internet of Things (IoT)

- The network of physical objects (things) that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the Internet.

Any systems pulling information from machines to be used in real time decision making?

<https://youtu.be/NaCNnP4TIDs>

INTERNET
OF THINGS



Tell us about your business plans or needs

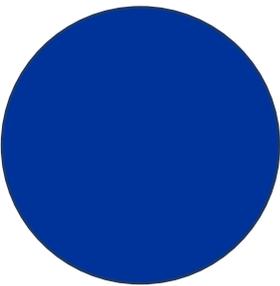
- Are there specific technical skillsets that your team lacks? (networking, coding, data analytics, cybersecurity etc.)
- Which specific positions in your business are currently the most difficult to fill?



Tell us about your business plans or needs

- How do you see technology helping your business?
- Where would you start and what would you need?
- What specific technologies are you considering for your business in the next 1-3 years?





Which Group Sounds Like Your Company?

A.

Industry 4.0 is all new to our company

B.

Heard about Industry 4.0, haven't addressed it

C.

Planning to implement Industry 4.0 soon

D.

Done a few things but no real system yet

E.

Fully committed to implementing & investing in Industry 4.0



Iowa Manufacturing Consortium

- Support for the Manufacturing Sector
- Training & Awareness Initiative
- Statewide Partners:
 - Iowa's Community Colleges
 - Iowa State's Center for Industrial Research & Service (CIRAS)
 - Iowa Economic Development Authority
 - Institute for Decision-Making, University of Northern Iowa
 - Association of Business and Industry
 - Iowa Department of Education
 - Iowa Workforce Development
 - Professional Developers of Iowa
- Develop curriculum to meet training needs
- Customized training for the existing workforce
- Develop/enhance certificate, diploma & degree programs
- Educate/inform Iowa's leaders





Adoption Support

- Iowa Economic Development Authority (IEDA) Grants
 - Manufacturing Industrial Internet of Things (IIoT) Infrastructure Investment Grants
 - Up to \$25,000 for the purchase of specialized hardware or software in the Industry 4.0 technology groups.
 - Manufacturing Innovation Equipment Grants
 - Up to \$50,000 for the purchase of specialized equipment aimed at helping manufacturers increase productivity, efficiency and competitiveness.
 - Notes:
 - Fewer than 75 FTEs (across all locations)
 - NAICS Code 31-33
 - 1-1 Cash Match
 - Manufacturing 4.0 Assessment from CIRAS
 - Can apply for both programs
- Community College 260 Programs
 - Retraining existing workforce



Final Thoughts

September - IEDA application opens
CIRAS is booking assessments now