



Preparing Technicians for the Future of Work – Part 2

6 Week Review of 6 Sectors

Aerospace and Aviation

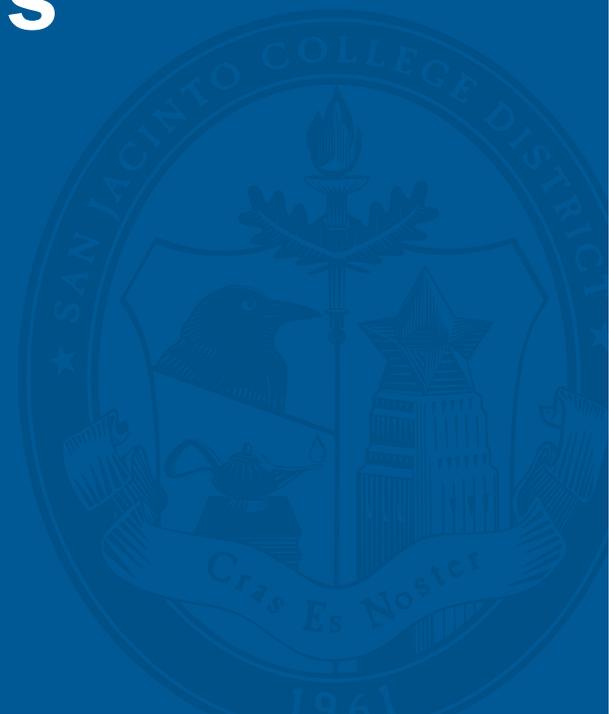
Biomedical Technology

Construction Services and Maintenance

Manufacturing

Maritime Services

Process Technology



Collecting the Information

- Leaders for each sector
- Interviews
- Matrix
- Weekly Discussions
- Final Report



Basic Results

- Technology has changed the way most industries function today and how they will function in the future.
- Technology is providing the opportunity for most companies to be more efficient and, also, more transparent across the company and, in some, cases across the sector.
- All employees will need to be digitally literate in all sectors with varying degrees of mastery depending on the sector and the tasks required of the technician.
- With the ability to collect digital data, the need to be able to analyze that data is becoming more and more critical.

Data Collection

Stacy Putman, INEOS



John Hark, Bertling Logistics



Greg Mitchell, Bigge



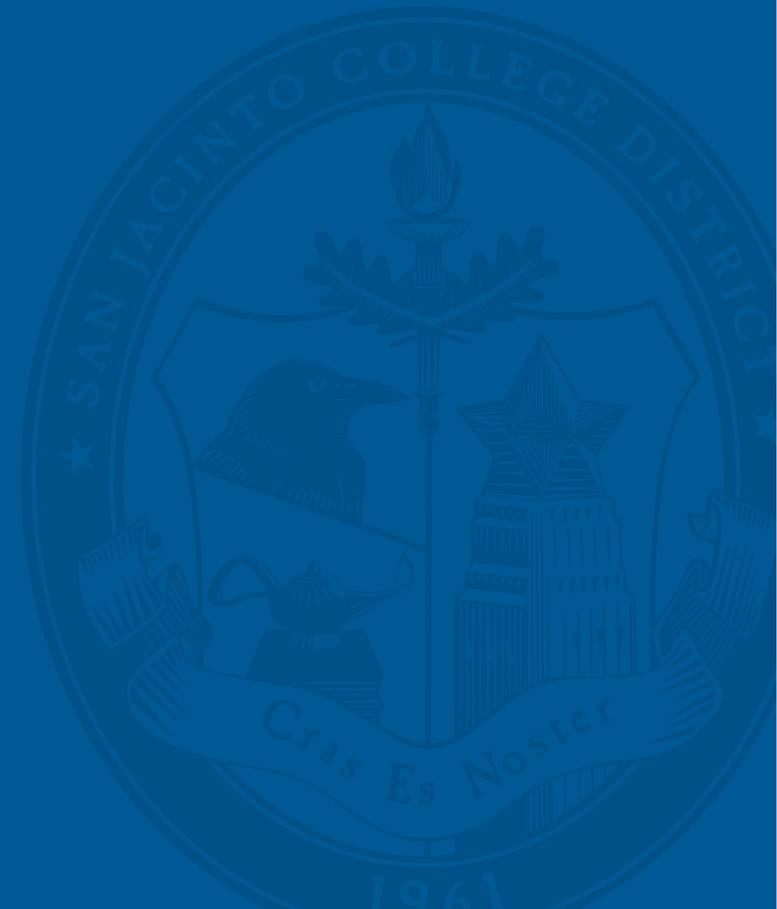
Panel Discussion

Q&A



**SAN JACINTOSM
COLLEGE**

Part 3



Instructor and/or Student Cards

- Nine Gulf Coast Community Colleges working together
- Cards for instructors or students to use to better understand the need for digital literacy/data analytics
- Template to gather information

Template

STUDENT CARD	
Section	Content
What is and how is it related to <u>Digital Fluency</u> ?	
Vocabulary – Basic Terms	
How will a technician use	
Scenario	
Skills Needed for High-Pay Rewarding Career	
Education	
Future trends	
Learn More Links	

INSTRUCTORS CARD	
Section	Content
What is <u>Digital Fluency</u> ?	
Scenarios 1, 2	
Read More Section	
IoT Technician Competencies	
Cross-disciplinary Digital Fluency Skills	
Classroom Activity <ul style="list-style-type: none"> - Tools Needed - Warm-up - Steps 	
Read more Links	

Data Visualization

What Is Data Visualization?

Data visualization represents information in the form of a chart, diagram, picture, or infographic so that the data can be quickly and easily understood. Technicians use data visualization software to create graphics that communicate complex and relational information to a variety of audiences.

Vocabulary

- Dataset – a collection of data, often organized in a spreadsheet or database
- Chart – a graphic representations of data; examples are charts, pie charts, histograms, line graphs for example
- Scale – marks on a visualization that indicate the range of data values presented. A scale on a graph reflects the magnitude of the data presented.

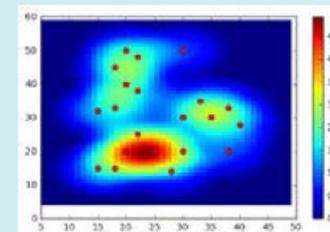
Common Types of Data Visualization

- A pie chart uses “pie slices” to show relative sizes of data.
- A histogram uses bars of different heights to group data into range.
- A scatter plot uses points plotted on an XY axis to show the relationship between two sets of data.

How will a technician use data visualization?

Evan Garcia is a technician for Green Mountain Power Company. He is responsible for tracking increased system outages over time across a metropolitan network, collects outage statistics, including system logs, environmental information, and helpdesk ticket details from network nodes and service centers in order to determine the cause. Evan stores the data in an Excel workbook, then imports data into SAS, Tableau, or MS Power BI visualization tools and creates a dashboard to present to management. The data dashboard provides an interactive geographical heat map showing outage details and other graphical representations of his data analysis of the event. The heat map allows management to make real-time decisions and troubleshoot problems.

A heat map uses a warm-to-cool color spectrum to represent data values by color.



Result

Cards will be available to all community colleges

Available in the 6 different sectors reviewed





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