Data, Dashboards, and Decisions

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Course Description

One university's experience utilizing business intelligence software to access and assimilate facilities data from multiple systems/platforms.

This integration is providing useful analytics leading to informed decision making and better resource management.

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Learning Objectives

- Define Business Intelligence, in concept and application, for a Facilities Management (FM) organization
- Review FM managerial mission, philosophies, standards, and goals
- Review standard FM work management systems
- Review BI application(s) to connect goals with work processes and systems
  - Benefits
  - Challenges

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Data = Understanding

"The goal is to turn data into information, and information into insight"

Carly Fiorina –
former executive, president, and chair of Hewlett-Packard Co.

"A goal without a plan is a wish"

Herman Edwards –
former NFL head coach

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Objective 1

Define Business Intelligence, in concept and application, for a Facilities Management organization

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Business Intelligence – What it Means

IBM says

- A new culture of data-driven decision-making is emerging, but making the right decision is only part of the equation. Decisions must be made rapidly and often, especially in high-impact moments when a customer is engaged, or an urgent operational need arises. **Hitting the mark for fast and accurate decisions requires that your analytics tools instantly turn your data into relevant insights**, giving the right people the right information and removing any obstacles to clarity. Modern analytics solutions achieve this with tailored reports and dashboards that transform a mass of data into visualizations that convey a breadth and depth of insight.

- Discover the decision-making power in your data

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Business Intelligence – What it Means to MTSU

- Business Intelligence is about *knowing:*
  - The University's and the organization's business,
  - The processes/services required to support the business,
  - How to employ your services to effectively meet the stated business objectives.
- Since business and processes/service methods are dynamic, the act of *knowing* must be dynamic. We call that *learning.*
- Modern Business Intelligence is about the analytical tools that accelerate the *learning* processes – particularly for business applications.
- For MTSU, we want to put the tools in the hands of the people whose business is to provide needed services in support of the University's mission.

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Oscars Night – Best Picture 2017

Courtesy A M P A S

Sebastian (Ryan Gosling) and Mia (Emma Stone) are drawn together by their common desire to do what they love. But as success mounts, they are faced with decisions that begin to fray the fragile fabric of their love affair, and the dreams they worked so hard to maintain in each other threaten to rip them apart.

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The Process of Learning

- Traditional process for learning
  - Hear
  - Test
  - Believe
- Modern process for learning
  - Hear
  - Believe
  - Test

Thinking In Bets, Making Smarter Decisions When You Don't Have All the Facts, Annie Duke

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Oscars Night – Best Picture 2017

Warren Beatty and Faye Dunaway crowned *La La Land* as the best picture of the year, two accountants from the firm were panicking backstage. That's because the presenters had received the envelope for Best Actress (which Emma Stone won for her work in *La La Land*). The actual winner for Best Picture was Barry Jenkins' *Moonlight*.

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Objective 2

Review Facilities Management managerial mission, philosophies, standards, and goals

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One Mission
One Philosophy
One Financial Standard
One Goal

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Facilities Services Mission

The mission of Facilities Services is to maintain the facilities and grounds and present them to the university tenants and the public in a safe, clean, and functional condition while managing the resources and assets in accordance with applicable requirements, procedures, and constraints.

- Safe, Clean, and Functional
- Landlord Paradigm
- Stewards
- Economists

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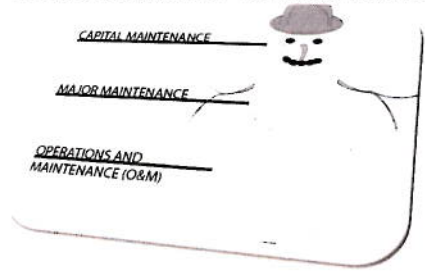Continuing
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Philosophy - Standard of Care
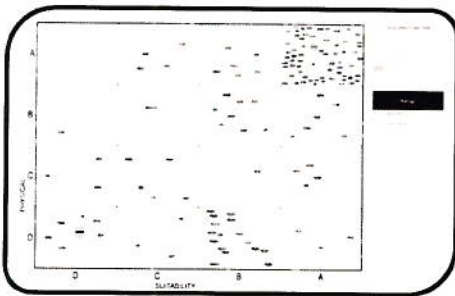
A's –> B's
B's –> B's
C's –> B's

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Financial Standard – Levels of Maintenance

CAPITAL MAINTENANCE

MAJOR MAINTENANCE

OPERATIONS AND
MAINTENANCE (O&M)

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Facilities Management Goals for Improvement

- Run the Facilities Management Business Better

- Better Decision-Making
  - Priorities
  - Trade-Offs

- Better Execution/Response
  - Productivity
  - Cost Effectiveness

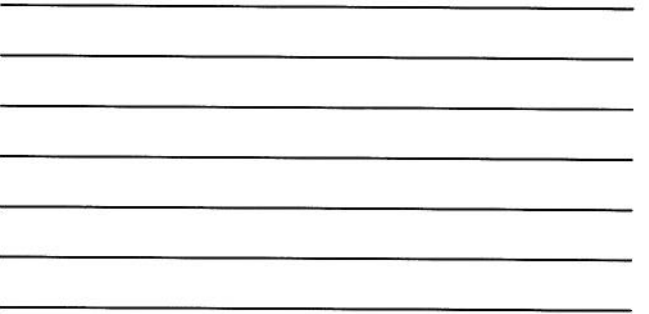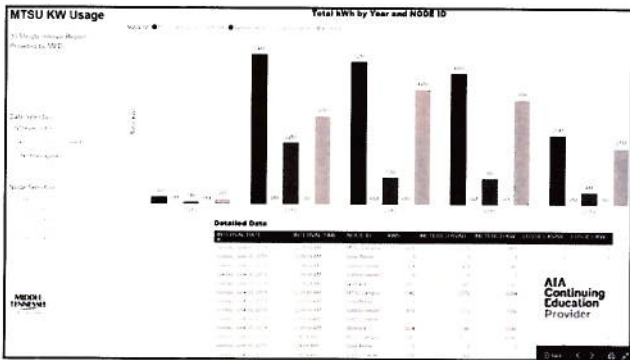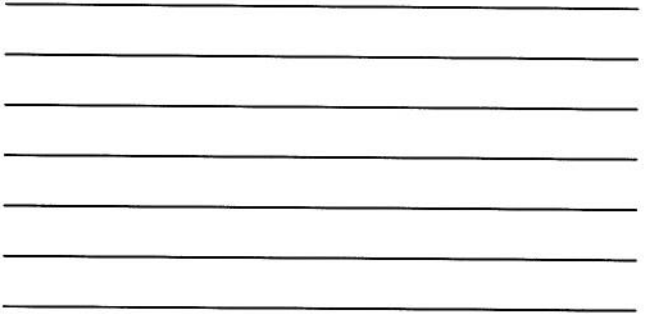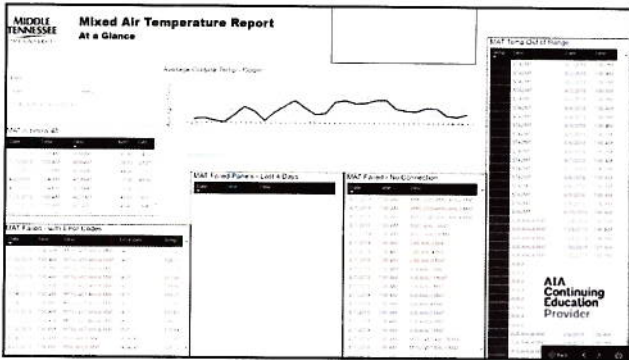AIA
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Objective 3

Review Work Management Systems

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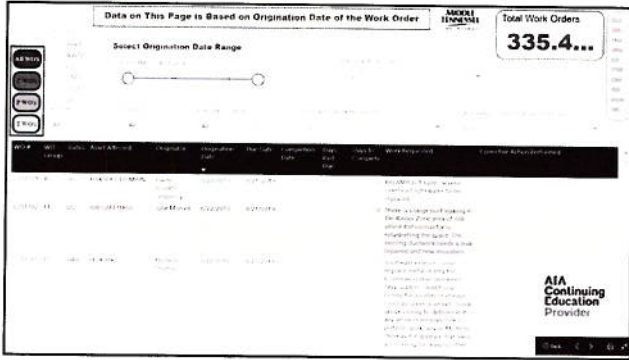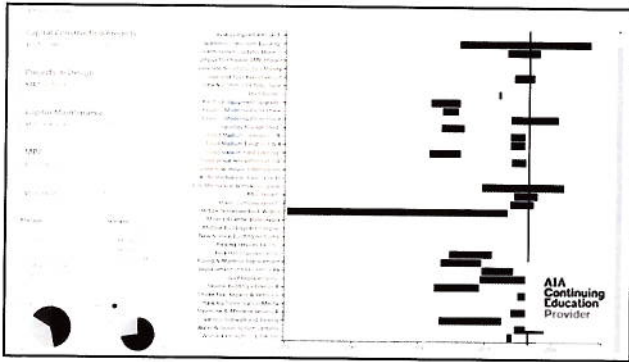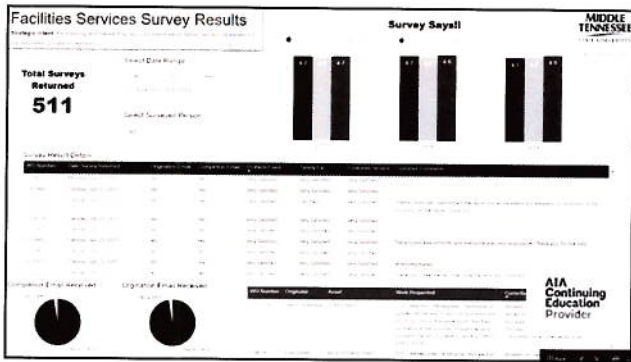Provider

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Review Work Management Processes and Systems

- Work Order System
- Financial Records
- Building Automated Controls/Seasonal Dashboards
- SCADA/Utilities
- Project Management Programs
- Customer Surveys
- PFIS – Physical Facilities Inventory Survey
- Motor Pool
- Third Party Vendors

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Data on This Page is Based on Origination Date of the Work Order — Total Work Orders 335.4...

Mixed Air Temperature Report
At a Glance

MTSU KW Usage — Total kWh by Year and NODE ID
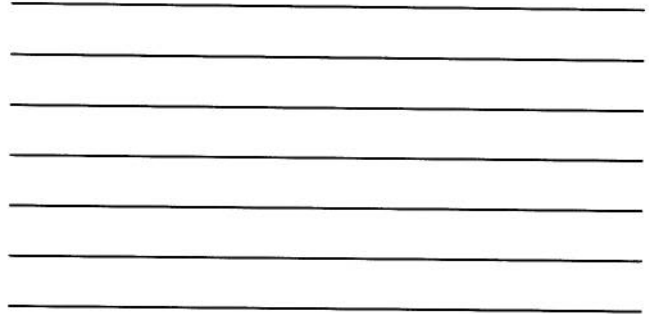
Objective 4

Review BI application(s) to connect goals with work processes and systems

- Benefits

- Challenges

PowerBI Demos

Roofs | Managers and Directors "Power Page"

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Measuring the Benefits

- Single platform front end
- Draws on data you have (from existing platforms) the Phil Collins affect.
- Read and analyze only - protects current systems.
- Curiosity is the chauffer
- More information/combats uncertainty in decision making
- Better investigation of past events
- Fluid/adaptable/responsive

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Single Platform Front End

- Software Selection Process
  - Trial, Error and Research
  - Cost and number of users
  - Desktop or Mobile, why not both?
  - Solution – Microsoft PowerBI

Gartner's Magic Quadrant For BI and Analytics Platforms (As of February 2017)

Power BI
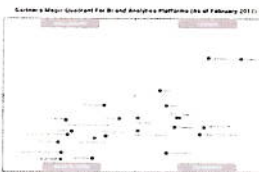
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Data Sets
Started with more questions than answers
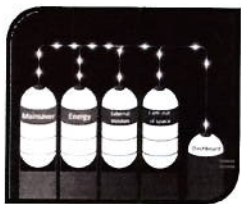
- Understanding the desires of the department and sub-departments within facilities
- How many datasets or silos do we have?
- Can we pull then into one dashboard?

Data Systems
- Work Order System (Mainsaver)
- SCADA (Electrical System)
- KONE (Vendor)
- Elevator Data
- Energy Services – Power Utility

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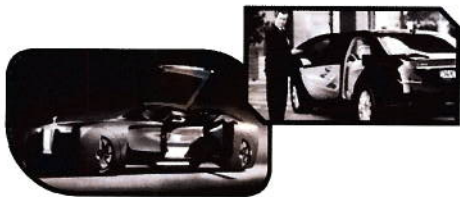Education
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Data Integrity of Systems

- Panic and Understanding
- Possession of data
- Connections / Firewalls
- ETL's – Extract, Translate and Load
- The process and explaining the benefits.

READ ONLY ACCESS

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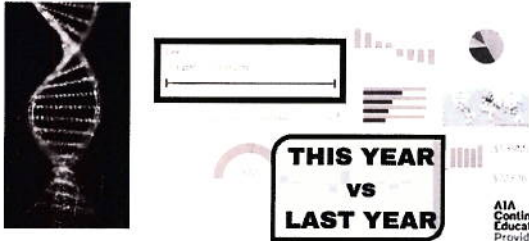
Curiosity is the Chauffeur

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More Information Combats Uncertainty
in Decision Making

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Better Investigation of Past Events

THIS YEAR
VS
LAST YEAR

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Fluid
Adaptable
Responsive

M T S U

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Hidden Benefits of Business Intelligence

- Translating tool for a diverse team
- Combats the national news affect - Finding/telling the whole story not only the bad news
- The value of transparency
- Promotes a learning work environment
- Reality check - You learn who you are

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Translating Tool for a Diverse Team

BILL GATES

Consistent platform allow for easier use.

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Combats the National New Effect

BREAKING NEWS ALERT
STATE OF

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Value of Transparency

Housing Matter Page

MIDDLE TENNESSEE

The above box is transparent

Housing and Residential Life

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Promotes a Learning Work Environment

I AM *true* BLUE

MIDDLE TENNESSEE STATE UNIVERSITY

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Reality Check - You Learn Who You Are

"Facts are better than dreams"

Good to Great, Jim Collins

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Challenges

- Focus on resulting
- Being too prescriptive in set up
- The risk of transparency
- IT's Role

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Summary

The Facilities Services Department at MTSU is utilizing business intelligence software to access and assimilate facilities data from multiple systems/platforms. This integration tool is providing useful analytics leading to informed decision making and better resource management.

- Results are promising
- Potential is great

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Final Question

What do you want to know?

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