* Three **applications**
  + Monitoring application: convey information at a glance
  + Analysis and reporting application: analyze exception conditions
  + Management application: improve coordination and collaboration
* Three **layers**
  + Graphical data to monitor KPIs
  + Dimensional data to analyze root cause of problems
  + Operational data that identifies what actions to take
* Three **types**
  + Operational dashboards track core operational processes
  + Tactical dashboards track departmental processes and emphasize analysis more than monitoring or management
  + Strategic dashboards monitor the execution of corporate strategic objectives. Strategic dashboards can be referred to as “scorecards.”

The Balanced Scorecard

* Provides a balanced presentation of both financial and operational measures
* Uses four perspectives
  + 1. Financial
    2. Internal business
    3. Innovation and learning
    4. Customer
* All measures are presented in a single management report
* Performance is compared to past performance, goals and plans, benchmarks, and best practices

Effective dashboards: communicate strategy, monitor and adjust the execution of strategy, deliver insights and information to all.

* Managers can enhance value creation with two general strategies:
  + Shifting project elements away from *must do* and toward *may do* status (operating options)
  + Performing a systematic search for opportunities that represent additional *may do* elements (growth options)
* Managers can enhance value creation with two general strategies:
  + Shifting project elements away from *must do* and toward *may do* status (operating options)
  + Performing a systematic search for opportunities that represent additional *may do* elements (growth options)
* Business intelligence (BI) is a **broad category of applications, technologies, and processes** for **gathering, storing, accessing, and analyzing data** to **help business users make better decisions**.
* *Intelligence*: small integrated circuits can be placed on anything
* *Instrumentation*: we can sense more things
* *Interconnectivity*: advances in telecom technology allow people to be more connected to each other
* *Machine-to-machine interconnectivity*: more things are connected to each other (“the internet of things”)
* **dashboard** is an online reporting tool that can address a range of performance management problems.
  + Dashboards are built on a business intelligence (BI) and data integration infrastructure
  + Dashboards enable organizations to measure, monitor, and manage business activity using both financial and non-financial measures
  + Dashboards provide both numerical values as well as visualizations of the data along with text commentary
  + Dashboards provide both “static” views of the data as well as “interactive” analytical capabilities (often referred to as “drill-down”)
* A **scorecard** is a type of dashboard where the information displayed is derived from the use of a structured methodology such as the Balanced Scorecard (often more tactical or strategic; p. 9)
* Three ways to get fired from Caesars Entertainment: theft, sexual harassment, and running an experiment without a control group.”

-gary loveman

STEPS in data cleansing

* Three ways to get fired from Caesars Entertainment: theft, sexual harassment, and running an experiment without a control group.”

4 STEPS to turn data into profits

* Listen to the data
  + It’s not a data challenge, it’s an analysis challenge
* Automate
  + It takes too much time to analyze thousands of products manually; use automated systems
* Build skills and confidence
  + Data-based pricing is a big challenge: culture, communication, etc. (Management Revolution!)
* Actively manage performance
* Degrees of price discrimination
  + First degree: seller extracts the absolute maximum price that every consumer is willing to pay.
  + Second degree: price varies based on quantity demanded
  + Third degree: price attributes vary by location