Introduction; From A to B to ERP

Conveyors are the primary and most cost-effective means of moving cartons, totes and packages. While conveyors themselves are fairly simple, their ability to communicate with one another and related systems is becoming increasingly sophisticated.

Source: https://www.mmh.com/article/conveyors_sortation_technologies_move_further_down_the_line

I. Hardware

A. Conveyor
  1. Non-powered
    a. Roller
    b. Wheel
    c. Chute
  2. Powered
    a. Transportation
      (1) Belt
      (2) Roller
      (3) Modular belt
    b. Accumulation
      (1) Minimum pressure
      (2) Zero pressure
      (3) Non-contact
B. Sorters
  1. Line sorters (e.g., sliding shoe)
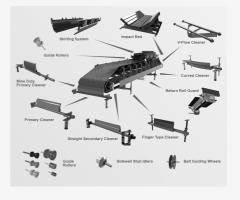 2. Loop sorters (e.g., bomb bay, cross-belt, tilt tray, etc.)

II. Software

A. Equipment level control
1. Device level control (e.g., variable frequency drive)
2. Conveyor level control (e.g., zone controllers on accumulation conveyor)
3. Sub system level control (e.g., 5 to 1 conveyor merge and sorter)
B. Order processing control
1. Storage
2. Planning
3. Routing
4. Picking
5. Wave management
6. Labor management

What does it look like when done right?

1. Material flow – An ideal materials handling system is designed to accommodate fluctuations in activity throughout the day and business levels throughout the year.
2. Information flow – An ideal connected distribution center gets the right information to the right people at the right time.
  a. Not too much information
  b. Not the wrong information
  c. Not to the wrong people

Conveyor Belts