INtools Implementation at Dow Chemical

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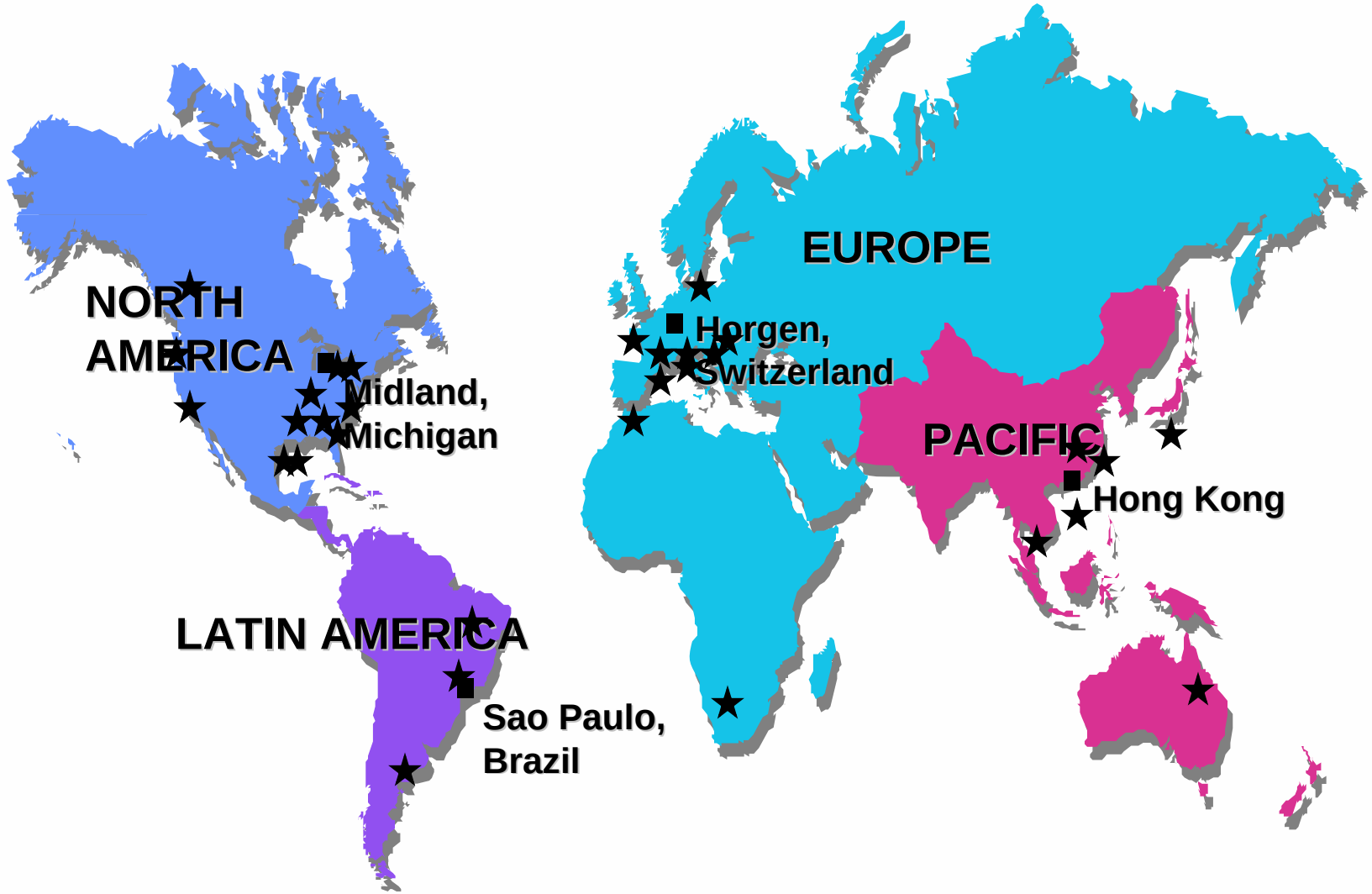
About the Company

Dow Chemical

- Was founded in 1897 by Herbert H. Dow in Midland, Michigan
- Is a global Science and Technology Based Company With Annual Sales of $49 Billion
- Producers of more than 3200 Products and Technologies at 200+ Manufacturing Sites in 51 Countries.
- Has approximately 43,000 Employees Globally

Geographic Headquarters Manufacturing Units



INtools at Dow Chemical

- SPI is part of the Total Integrated Suite
  - SP Enterprise
  - Aspen Zyqad
  - SP P&ID
  - SP 3D
  - INtools - SPI
  - SP Electrical

- Today the tools are Stand-Alone but with an Eye on the Planned Integrated Environment

Dow's Implementation Strategy

INtools

- Is the Common, Global Tool for Instrument Design
  - Used by all Dow Engineering Groups
  - Coordinated with EPC Suppliers
- Provides Plant Life Cycle Data Management
- Provides Operations Access to Plant Data via SmartPlant Explorer
- Utilizes data Migration of Existing Information to Eliminate all Other Legacy Instrument Design Tools

INtools Production Infrastructure – V. 6.0.7.3

- Four Oracle NT Servers
  - Contains 17 Oracle Instances Aligned Geographically
    - Average of 23 Domains per Instance
    - Maximum of 30 Domains allowed per Instance
- Two Citrix Application NT Servers in the Dow Domain
- Two Citrix Application NT Servers in the Extranet Domain
- One Web NT Server for the Dow Launch Center application
- Our NT Servers are currently located in Freeport Texas supporting all of the Global INtools users
- We are currently implementing a Windows 2003Virtual Machine environment at Dow. These severs will be located in Midland Michigan and will be upgraded to V. 7.0.8.2

Dow's INtools Configuration

- All Dow Plants are created from the Seed Plant
  - Default Panels
  - Default Cables
  - Complete with 149 normalized Spec Forms, Pages and Formats
  - Component, Cable and Panel UDFs are maintained in in the seed Plants

- Any changes to the Seed Plant for Spec Forms, Panels, Cables, etc. are inserted into all Dow Plants

INtools Implementation

- There are 384 Dow Plants in INtools
  - With more than 1,000,000 instrument tags
  - Approximately 50,000 Panels not including Field Device Panels
  - More than 780,000 Plant Cables
  - 560,000+ Instruments assigned to a Specification Sheet

INtools Support

- Dow's Global Support Structure
  - Joe Jones (Houston) - INtools Product Manager
  - Roland Hancock (Houston) - INtools Lead SME
  - Robert Foshee (Houston) - INtools SME (User Support)
  - Michael Lynch (Houston) - INtools SME (User Support)
  - Kevin Saul (Houston) - INtools SME (User Support)
  - Rhonda Strimple (Houston) - INtools SME (User Support)
  - Hans Taalman (Terneuzen) - INtools SME (User Support)
  - Angela Morissette (Fort Saskatchewan) - INtools SME

  - Gary Russell (Plaquemine) - Legacy Data Migration

- We support 390+ users in the Dow Domain
  - Additional users will be added as the India Design Center (IEC) ramps up

- We also provide administrative support to 110+ EPC users in the Interface Domain

Other INtools Teams

- The INtools Steering Team
  - Goal is to support the successful Global implementation and on-going use of INtools
    - Directs the efforts of the INtools Product Support Team in how INtools is configured and used for the life cycle of a plant
    - Provides input as a single voice to Intergraph on future development
- INtools Site Focal Points
  - Each Major Site is represented
  - Provides Support for:
    - Configurations, work process, deliverables, MOC's, feedback and request to Intergraph for product updates
    - Work with the Legacy Data Migration Team to
      - Identify Plants for LDM and work as part of the LDM Team for their site
    - Participate in Site User Training
    - Input to training plans and schedules

INtools Legacy Data Migration Process

- The team was created to Develop Plans and Actions to:
  - Identify the Data Owners
  - Define What Data Exists that Can be Migrated
  - Determine the Value/Quality of the Data
  - Develop Implementation Plans for Migration
  - Identify Supporting Resources

- Migration Plans are in Concert With INtools Implementation Plans

Legacy Data Migration Results

INtools Legacy Data Migration by Site

Site	Number of Plants	% of Plants Migrated
South America	11	83.35%
Asia	8	100%
Europe	115	99.5%
North America	102	62.1%
Canada	10	76.9%
Total Migrations/Percentage	246	85.55%

Questions?