



Reducing the Distance to Integrate: DTE Energy use of CIM at the ESB

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Driving to Grid 2020

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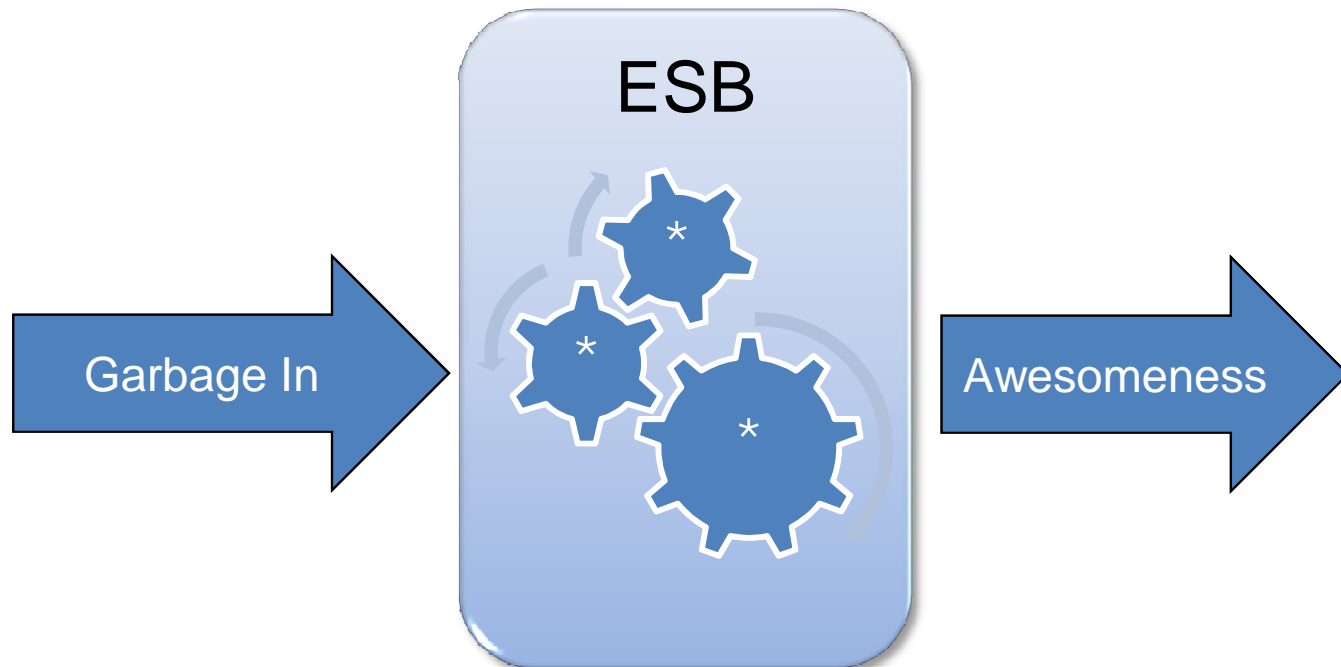
Common Information Model

- IEC 61968, 61970, 62325
- Data Reference Model
 - Criticism: A dictionary, not a writing guide
- Profiles (subset of the model) describe useful functionality
 - e.g. EndDeviceEvents, MeterReadings
- Historically limited guidance on using profiles for integration
 - IEC 61968-100 to be published soon



ESBs are magical

“In my understanding, you simply plug random stuff into one, and a complete, flawless, end-to-end system suddenly appears.”

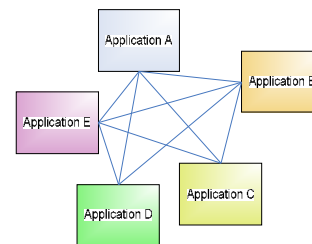


I trust you to correct me if I am mistaken... but this is what I've been telling all my clients.

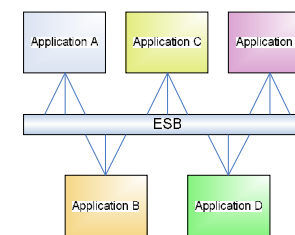
*Magic

Enterprise Service Bus (ESB)

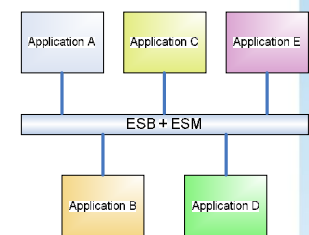
- Point-to-Point integrations are more difficult to maintain, more fragile as complexity increases
- Facilitates reuse
- An ESB does not fix interface or data governance challenges
- Reduces the distance to integrate



- Point-to-point systems
- Typically difficult to integrate
- "Brittle" interfaces that are difficult to change
- Duplication of data and business logic



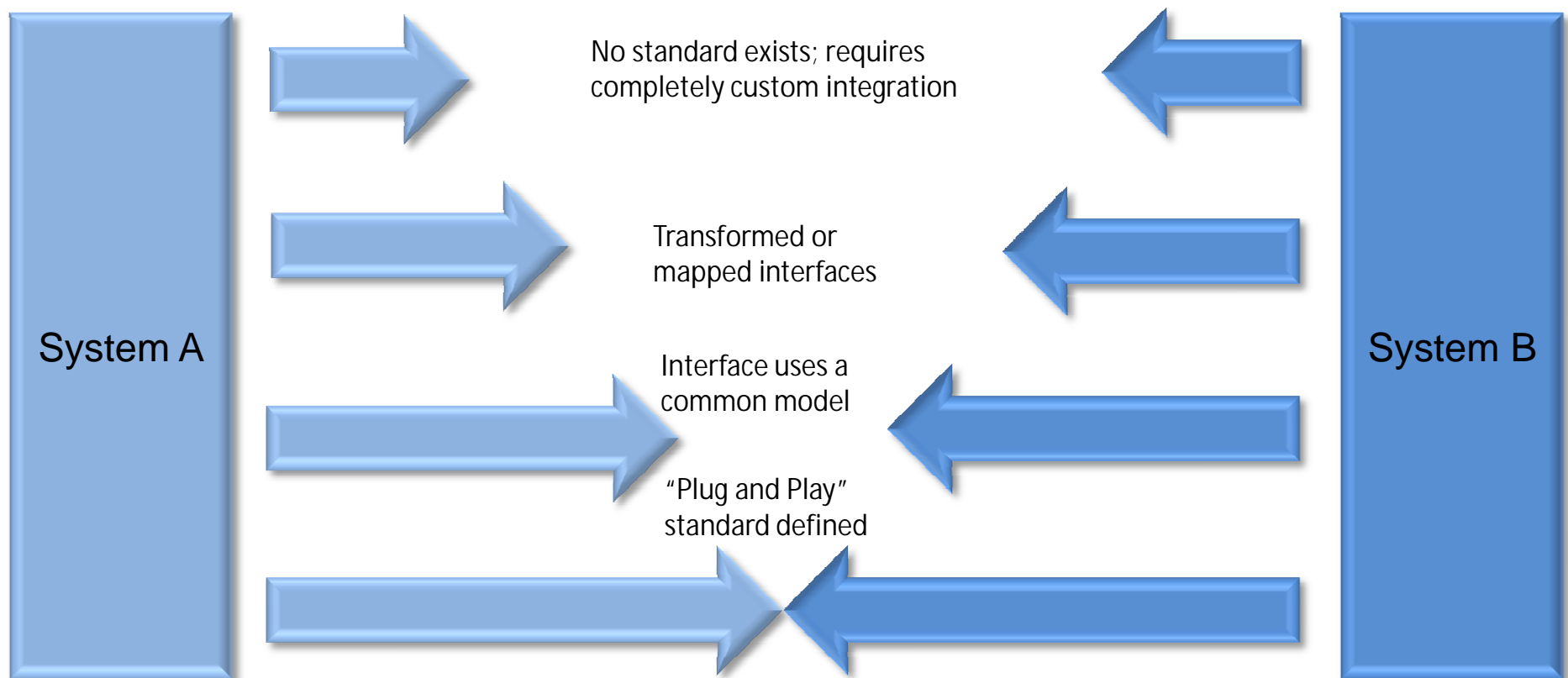
- Web services allow for easier interoperability
- Web services begin to promote reuse
- Business processes are easier to integrate
- Interfaces are easier to develop and maintain
- While an improvement over point-to-point systems, governance may still be a problem



- Interfaces have been rationalized and harmonized to eliminate redundancy
- Cost of ownership is reduced
- Governance is improved
- Data quality increases

Distance to integrate

Use of the CIM may reduce, but does not eliminate, the distance to integrate





DTE Energy Overview: Facts and Figures

Company Name: DTE Energy Co. (NYSE:DTE)

Corporate Headquarters: One Energy Plaza
Detroit, Michigan 48226

Chief Executive Officer: Gerard M. Anderson

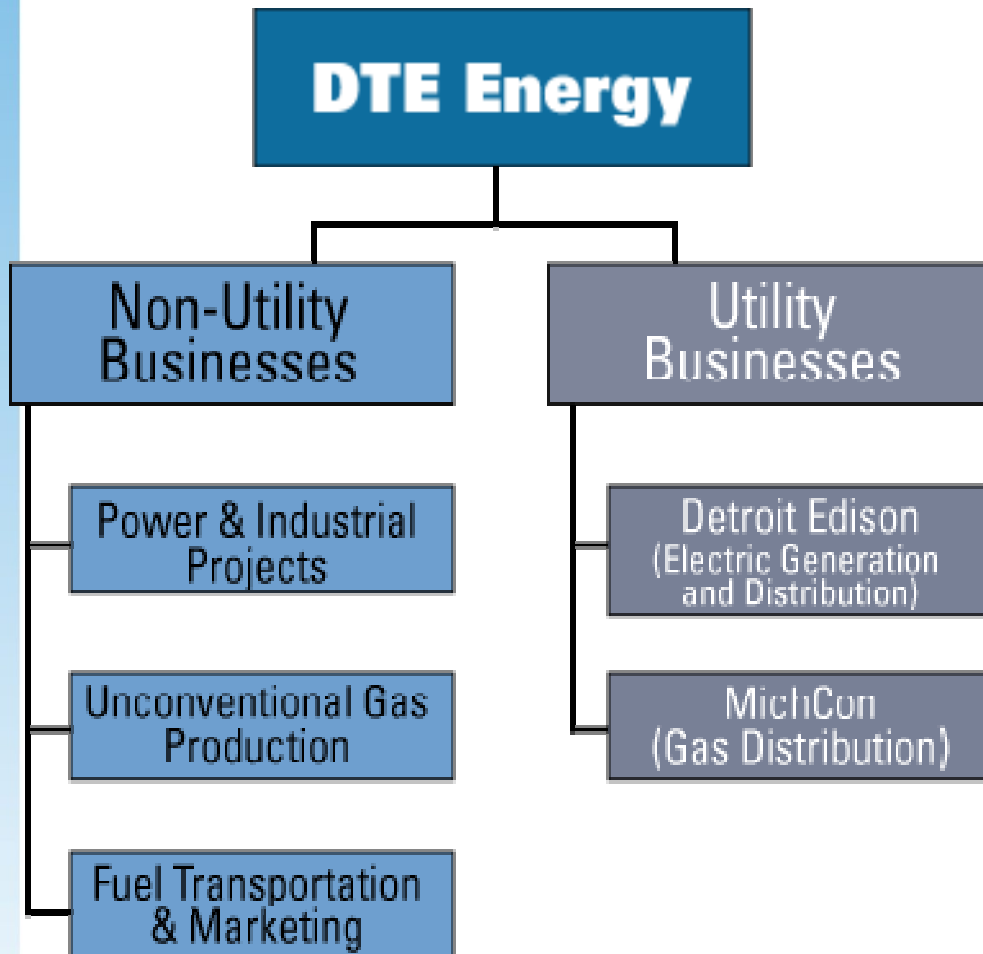
Employees: 9,800

Financial Information:

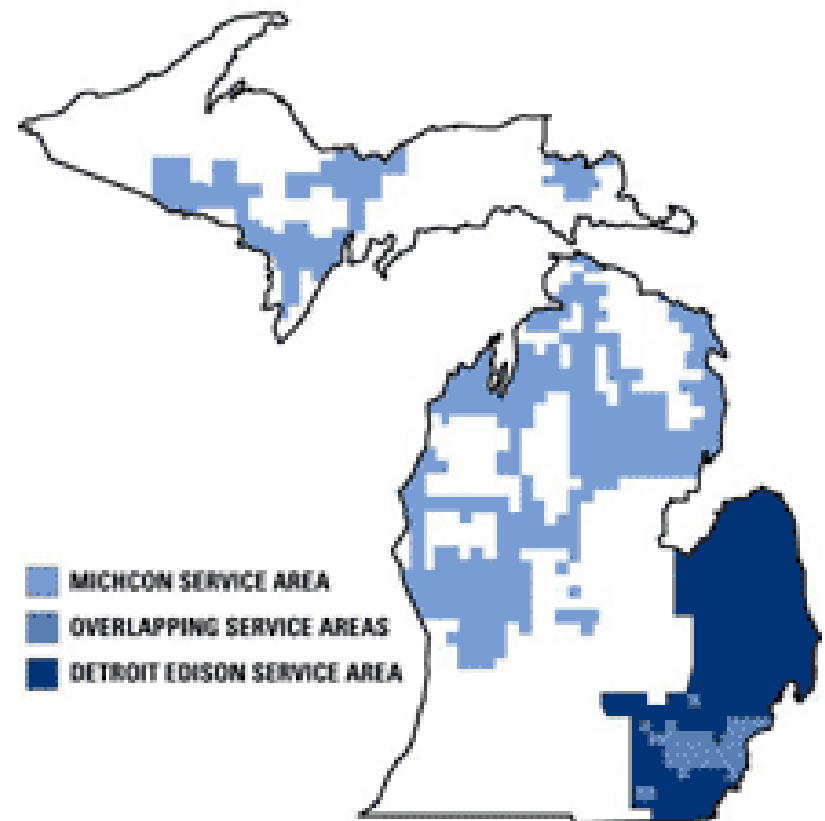
Revenue	\$8.6 Billion
Net Income	\$630 Million
Market Cap	\$7.7 Billion
Assets	\$25 Billion

Avg. Shares Outstanding: 169 million

DTE Energy Overview: Business Segments

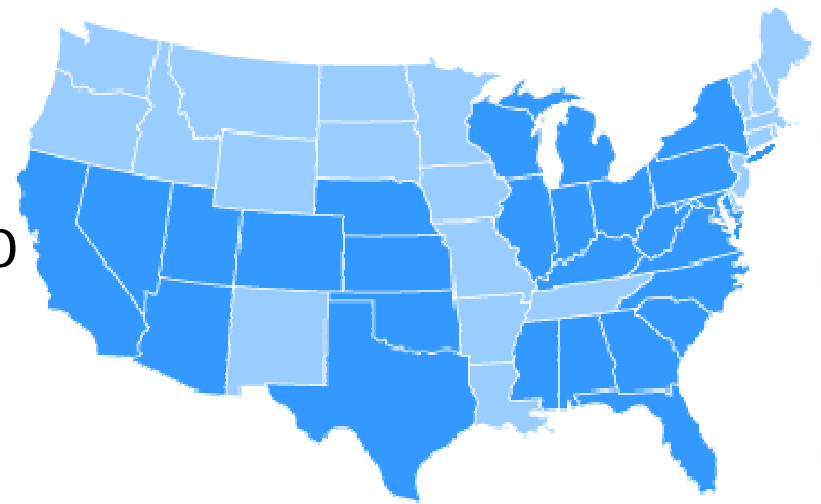


MICHCON/DETROIT EDISON SERVICE AREAS



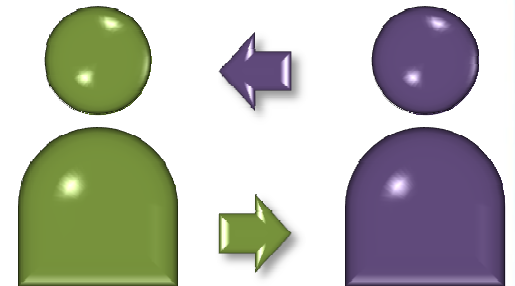
DTE Energy Overview: Interesting Facts

- 10th largest electric utility and the 11th largest gas utility
- 2.1M electric customers and 1.2M gas customers
- Investing \$1 billion in biomass, solar, wind and other renewable energy sources
- Earned 11% return on equity for both electric and gas
- Contributions of nearly \$7 million to non-profit organizations
- Currently operating in 24 states



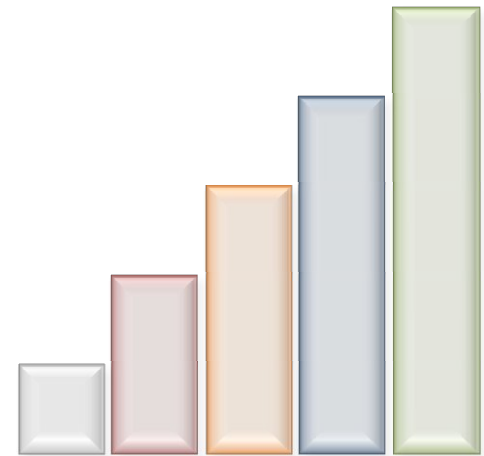
Lessons Learned

- CIM adoption did not go as well as expected
- What DTE Energy would have done differently:
 - Build out domain areas based on areas of the business
 - Look at other information models to build out ESM
 - Dedicate an effort to develop the ESM
 - Improve communication regarding the ESB and CIM
 - Participate more in the CIM User Group
 - Take advantage of help from other entities



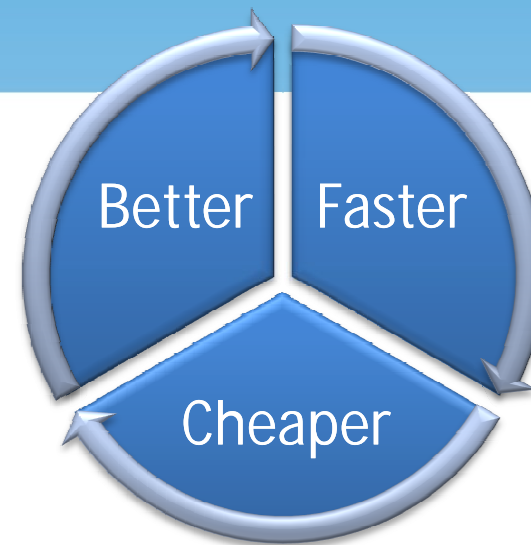
Evolving Maturity

- Requirements-driven change for ESM development
 - CIM is the base for DTE Energy's ESM
- Determine other common models for where the CIM does not fit



Business Value

- Lowered distance to integrate
 - time to delivery, total cost of ownership
 - common knowledge of the model
 - common integration patterns
- DTE Energy value beyond lowering the distance to integrate
 - basis for their ESM
 - CIM becoming a standard for electric utilities
 - interoperability with outside partners who have also adopted CIM
 - standardize business terms and make these terms common across business areas





Maintaining CIM Versions

- Still evangelizing the use of CIM, ESM and ESB
 - Many people believe the risk outweigh the value

CIM compliance over time

- Missing strategy for long term maintenance of CIM
 - Version services for minor changes to CIM/ESM



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For more information

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Together...Shaping the Future of Electricity

Grid-Interop 2012