Model Governance for Advanced Analytics

What Is Different and What Have We Learned?

2019 ERM Symposium

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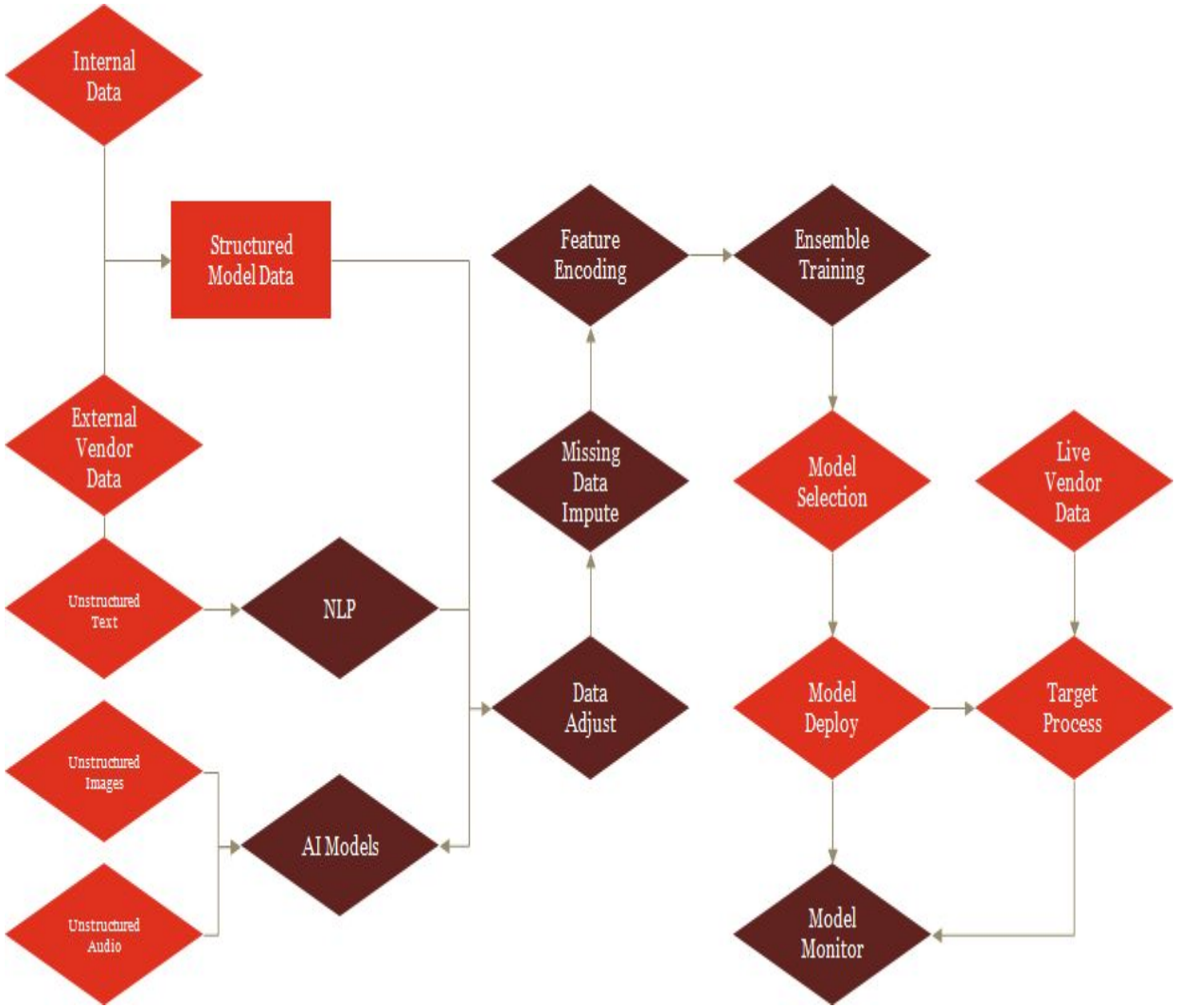
Advanced Analytics Models Challenge Existing Model Governance Frameworks

- Complex modelling methodologies require expert knowledge
- Multiple open-source implementations of the same methodology makes reperformance complicated
- Unstructured data sources are hard to evaluate for relevance, stability or quality
- Opaque model architectures make it harder to compare to business judgment/other models
- Decentralized development processes silo expertise and assessment of appropriate use/risks
- Stacked model development processes obscure boundaries of model review
- Reproducibility not possible with some high-performance computing



Industry Is Rethinking How The Framework Is Applied

- Principles of identification, assessment and management of risk are mostly sound
- Current approaches sometimes too restrictive preventing access to expert knowledge
- Collaboration between risk management and first-line teams not emphasized strongly enough
- Adoption of cohesive modelling architectures of mutual benefit
- Definition of “model” may need to be rethought

Leverage First-Line Modelling Talent

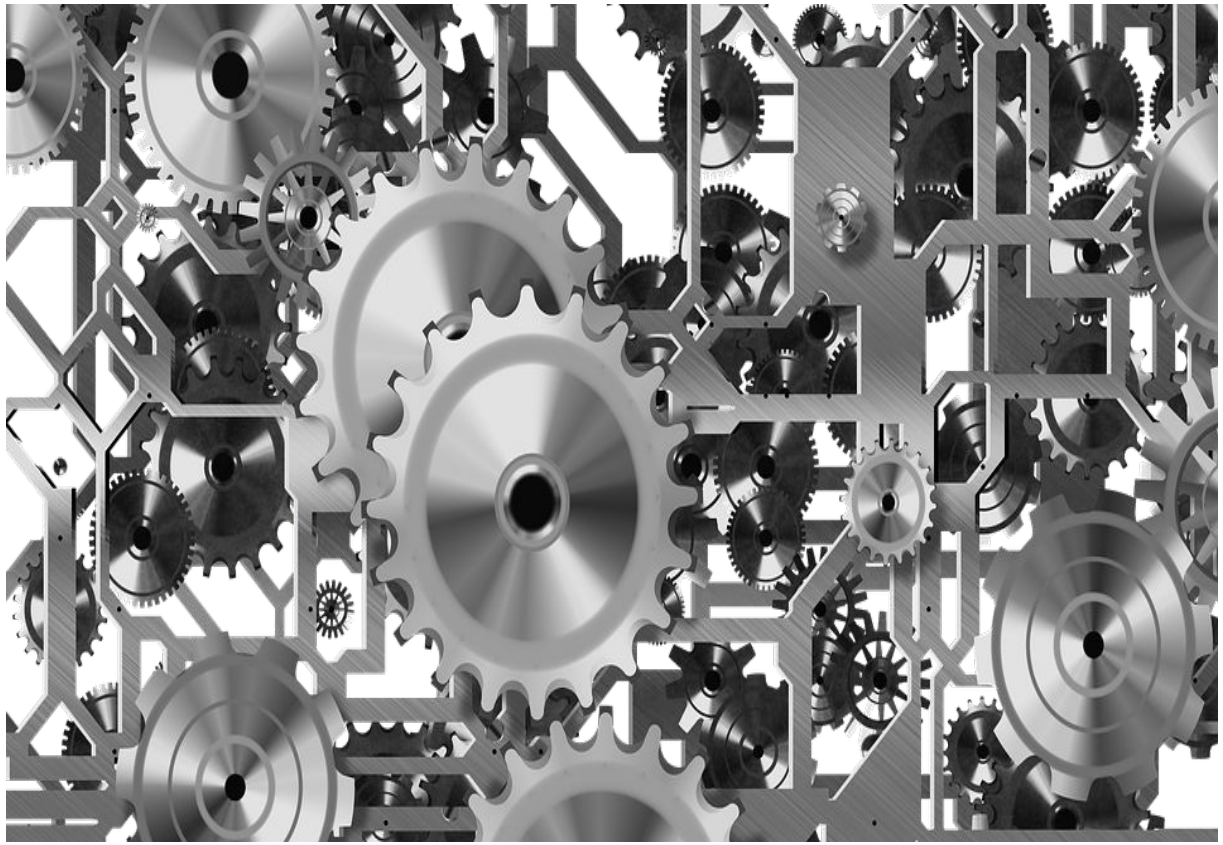
- Current practices often exclude first-line talent from participating in model review
- Compounded by lack of a deep employment pool for skilled advanced analytics practitioners
- Loosening this requirement to allow modellers to participate in model review has many benefits
  - Resource constraints loosened
  - More comprehensive risk assessment
  - Cross-training opportunities
- Additional risk is offset by increased risk identification and assessment

Increased Collaboration Between Second And First Line

- Modellers need to understand they are responsible for identification of risk and mitigation including documentation
- Improved first-line practices reduces resource needs
- Proactive risk management is better risk management
- Cross industry hybridization more effective with comprehensive risk management training for first-line modellers

Adoption Of Cohesive Model Development Frameworks

- Comprehensive model development frameworks tie together siloed processes and enable overarching review of E2E model development processes
- Increase efficiency and effectiveness of first-line efforts
- Evolving market of solutions that can accommodate existing advanced analytics tools and skill sets
- Risk management input may tip the balance for first-line teams seeking budgetary approval for these tools internally



Redefining Models

- **SR 11-7 Definition** - “a quantitative method, system, or approach that applies statistical, economic, financial, or mathematical theories, techniques and assumptions to process input data into quantitative estimates”.
- Places an emphasis on what models look like rather than the principles of risk
- Silos models when interdependency is becoming more pronounced and common
- Includes models that may be better served through other risk management practices

Thank you

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