2018 Predictive Analytics Symposium

Session 36: Model Governance in an Open Source World

Model Governance in an Open Source World

Moderator: **Stuart A Klugman**

Presenters: **Dorothy L Andrews**
Rohan N Alahakone

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- -**Do** alert SOA staff and/or legal counsel to any concerning discussions
- -**Do** consult with legal counsel before raising any matter or making a statement that may involve competitively sensitive information.

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An Open Source

Model governance in an open-source world

ROHAN N. ALAHAKONE AND DOROTHY L. ANDREWS

JUNE/JULY 2018

Old School Approach

Step 1: Define Problem

Step 2: Write Specs

Step 3: IT Project Queue

Step 4: IT Business Analyst

Step 5: IT Resource Assigned

Business-IT Alignment

Install a High-Level IT Liaison

Why The right person in the right place can materially affect the success of your technology initiatives.

What you should know Qualified candidates are rare—and are worth their weight in gold.

Source: http://www.baselinemag.com/c/a/Past-News/BusinessIT-Alignment

Old School Approach

Step 6: IT BA Review

Step 7: BA & Actuary Review

Step 8: Errors Identified

Step 9: Program Corrections

Step 10: Iterate Steps 6 to 9
          until ….

Business-IT Alignment

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Your solution has arrived!!!

Model Validation – A Governance Activity

1996 Goldman Sachs Quantitative Strategies Research Note

❶ Inapplicable model

❷ Incorrect model

❸ Correct model, incorrect solution

❹ Correct model, inappropriate use

❺ Badly approximated model

❻ Software and hardware bugs

❼ Unstable data

An Open Source

Model governance in an open-source world

ROHAN N. ALAHAKONE AND DOROTHY L. ANDREWS

Introduction

- What is open source vs closed source

- What is model governance

- Applicability

Establishing a model governance framework

Step 1: Set up the environment

Step 2: Define the scope
- Choose the models and processes to be governed
- Establish the rules

Establishing a model governance framework

Step 3: Appoint the Model Steward

The primary responsibility of the model steward is to make sure the instituted model governance framework processes and controls are followed.

Makings of a Model Steward

Roles within a model governance framework

- Model users
- Model developers
- Model approvers

Roles within a model governance framework

- Sponsors of model change
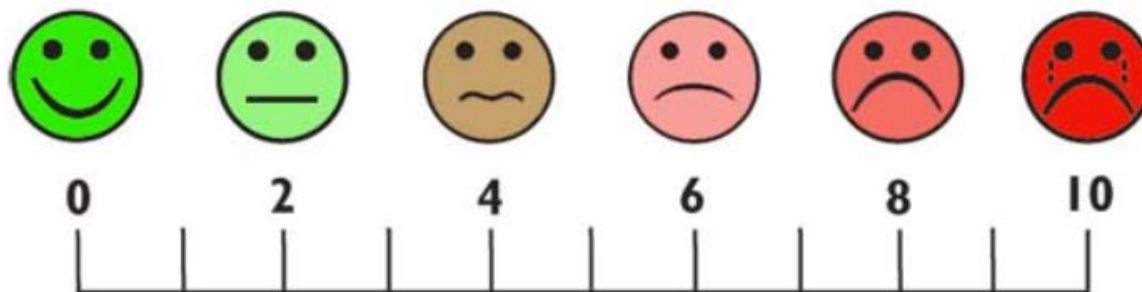- Model Steward
- Gatekeeper
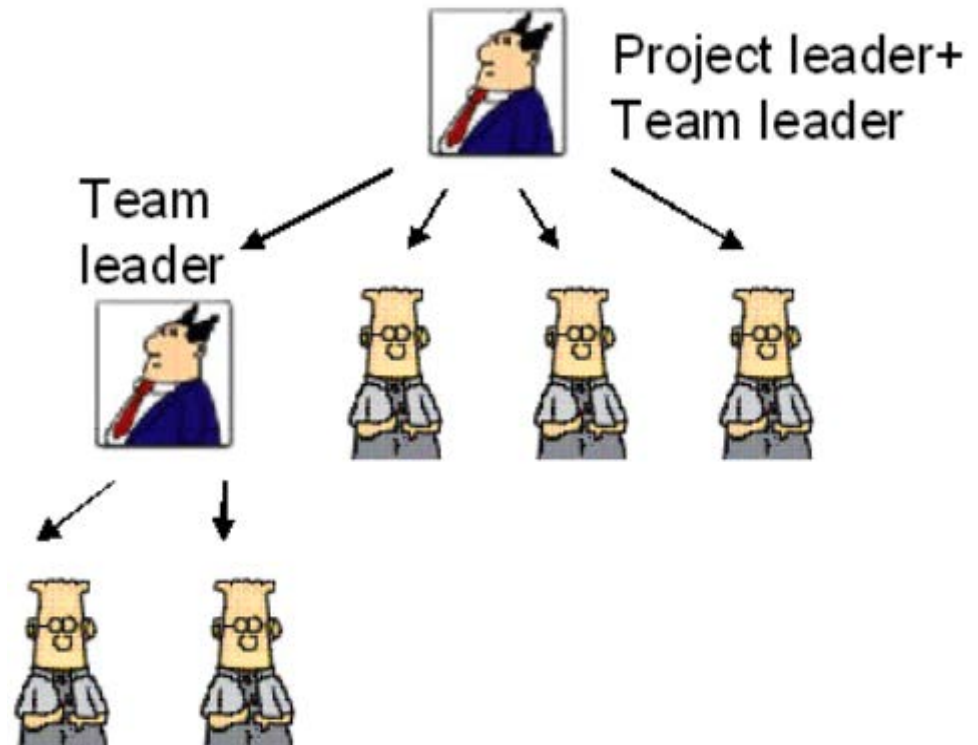- Model Owner

Establishing a model governance framework

Early pain points/complaints:

- Protocol prevents making changes on-the-fly
- Perception of management's trust
- Too much red tape
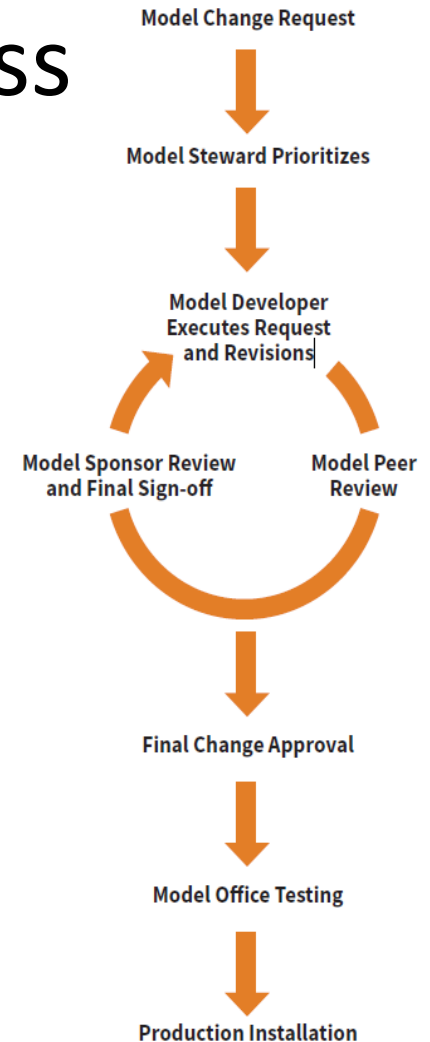- Too much time spent on documentation

Separation of duties

- Conflicts
- Independence
- Dilution
- Expertise
- Review

Model Change Control Process

- Change request

- Prioritize request

- Model developer works on request

- Peer and sponsor review of change

- Change Approval

- Test and move to production

Model Change Request

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Model Steward Prioritizes

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Model Developer Executes Request and Revisions

Model Sponsor Review and Final Sign-off   **Model Peer Review**

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Final Change Approval

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Model Office Testing

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Production Installation

Standards, policies and rules

- Formal processes, rules and standards are in place and followed by all concerned:
  - Coding Standards
  - Peer Review
  - Change Analysis
  - Validation Standards
  - Documentation

Information Technology

- Modeling environment
- Software
- Dedicated team
- Applications

Open-Source Systems

Pros

>> Flexibility to make changes

>> Quicker turnaround time making changes

>> Likely less expensive as vendor is not responsible for customization

>> Unhampered creativity and innovation

>> Unlimited transparency

Cons

>> Lack of audit trails

>> In-house testing required

>> Inefficient source for computations

>> Staff need training in programming

>> Unauthorized programming changes

>> Need to standardize coding styles for conformity

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>> Built-in ve
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In a closed source world…

- Vendor responsibility

- Regression testing

- Extent of analysis and review of code changes

- Process for model change requests

- Governance framework
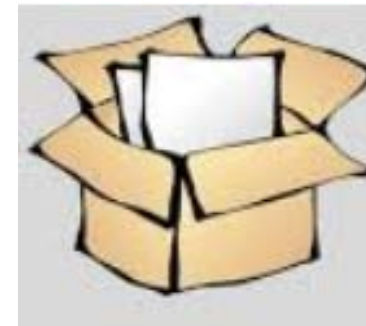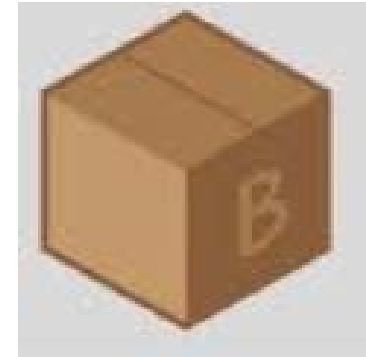
Management commitment

- Management involvement in the model change control process

- Benefits of the governance framework

- There is no such thing as magic!

"What if we don't change at all … and something magical just happens?"

Credibility – Ownership – Visibility – Documentation

Questions?

Dorothy L. Andrews, ASA, MAAA, CSPA

Consulting Actuary

Merlinos & Associates

3274 Medlock Bridge Road

Peachtree Corners, GA 30092

dandrews@merlinosinc.com

678.684.4869

Rohan N. Alahakone, ASA, MAAA

Consulting Actuary

Merlinos & Associates

3274 Medlock Bridge Road

Peachtree Corners, GA 30092

ralahakone@merlinosinc.com

678.684.4404