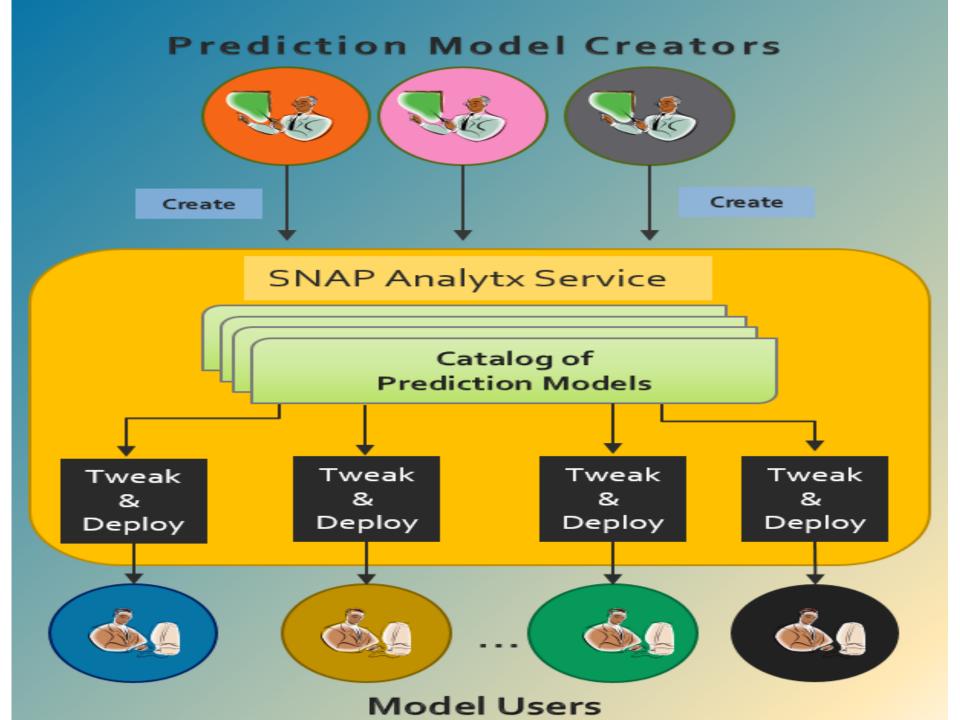# Snap-Analytx Prediction as a Service

BARUG May 2013

Prediction is very hard, especially about the future - Yogi Berra

- Building prediction models requires expertise in statistics/data mining/ML, expertise in languages like R, domain experience
- Data preparation
- Integrating prediction into existing workflow
- Monitor and modify model as needed

Prediction Model Creators

Create

Create

SNAP Analytx Service

Catalog of Prediction Models

Tweak & Deploy

Tweak & Deploy

Tweak & Deploy

Tweak & Deploy

...

Model Users

"Extensible" Models as a Service

- R programmer writes an extensible prediction model that can be used by multiple customers. Snap-analytx will
  - Host the model (resource provisioning)
  - Help customers select a model
  - Help customers integrate their training data
  - Facilitate collaboration with R programmer (author) to customize model as needed.
- Not plug-and-play. Similar to packaged apps

Extensible SNAP models

- Models are already tuned to neither underfit nor overfit training data
- Extensible models must be capable of handling larger variations in data
  - Features can be completely missing
  - Use domain expertise to judge which features are required and which features are optional
  - Use different prediction algorithms depending on what features are available
- SNAP will select a model only if customer's data satisfies constraints specified by R programmer

Known Challenges

- Extensible models may work when the customer's application is a packaged app
  - Can be hard to foresee variations for non-standard schema
- Models will need to be customized
  - Customization cost cannot become so prohibitive that a custom solution seems attractive
- Customers may want to retain IP resulting from extensions to models

Interested in Hosting Models?

- Visit snap-analytx.com - click on "Model Author"
- info@snap-analytx.com
- partners@snap-analytx.com