

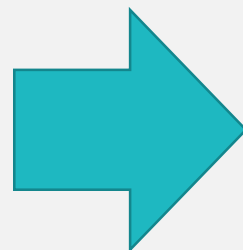
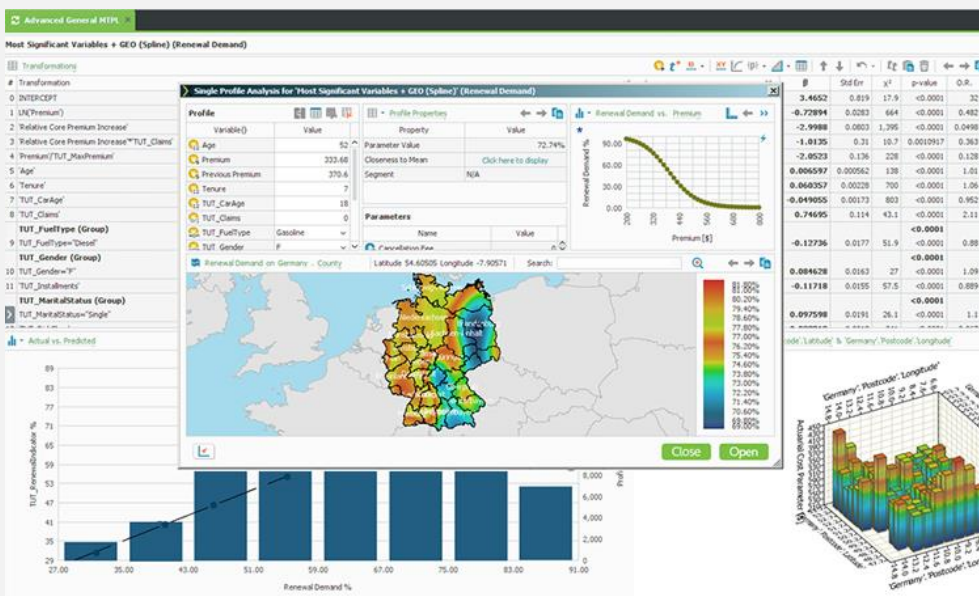


# L'analytique en temps réel: Comment Co-operators réussit avec SAS RTDM

Frédéric Guillot | Club des utilisateurs SAS de Québec | 31 octobre 2018

# Contexte

## Environnement de modélisation



## Environnement de production

Guidewire PolicyCenter

Submission 21694996 Search Operations (Return to Operations)

What is your operation? \* Selling beauty products

Group B&P Services

Show All of This Group  Yes  No

Search

| Description   | Code    | Group        | Risk Grade |
|---|---------|--------------|------------|
| <input type="checkbox"/> Beauty parlours - no tanning beds- no laser therapy  | 7297a00 | B&P Services | M          |
| <input type="checkbox"/> Beauty parlours - with tanning beds and /or laser therapy  | 7297a10 | B&P Services | H          |
| <input type="checkbox"/> Consultants (NOC) - Excluding Oil & Gas consultants. For Oil & Gas consultants, refer to Oil & Gas Risk Grades | 7408c90 | B&P Services | H          |
| <input type="checkbox"/> Driver training schools (private)  | 7299a00 | B&P Services | M          |
| <input type="checkbox"/> Finance companies / credit bureaus / Institutions  | 140a00  | B&P Services | L          |



# Aujourd'hui

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## But

Partager notre expérience avec SAS RTDM pour implanter l'analytique en temps réel

## Agenda

1. Qu'est-ce que SAS RTDM?
2. Deux exemples réalisés chez Co-operators
3. Discussion – Points forts & leçons apprises

# 1. Qu'est-ce que SAS ReaTime Decision Manager



# 1. Qu'est-ce que SAS ReaTime Decision Manager

Box of Maths



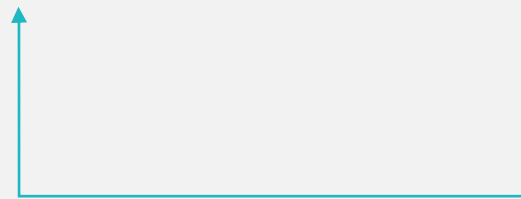
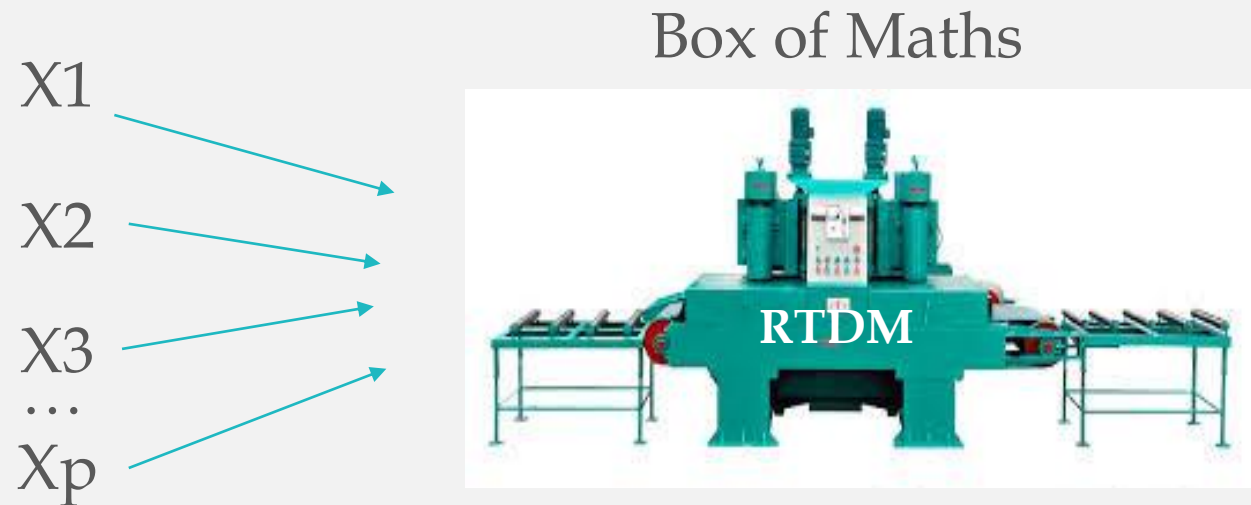
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Box of Maths



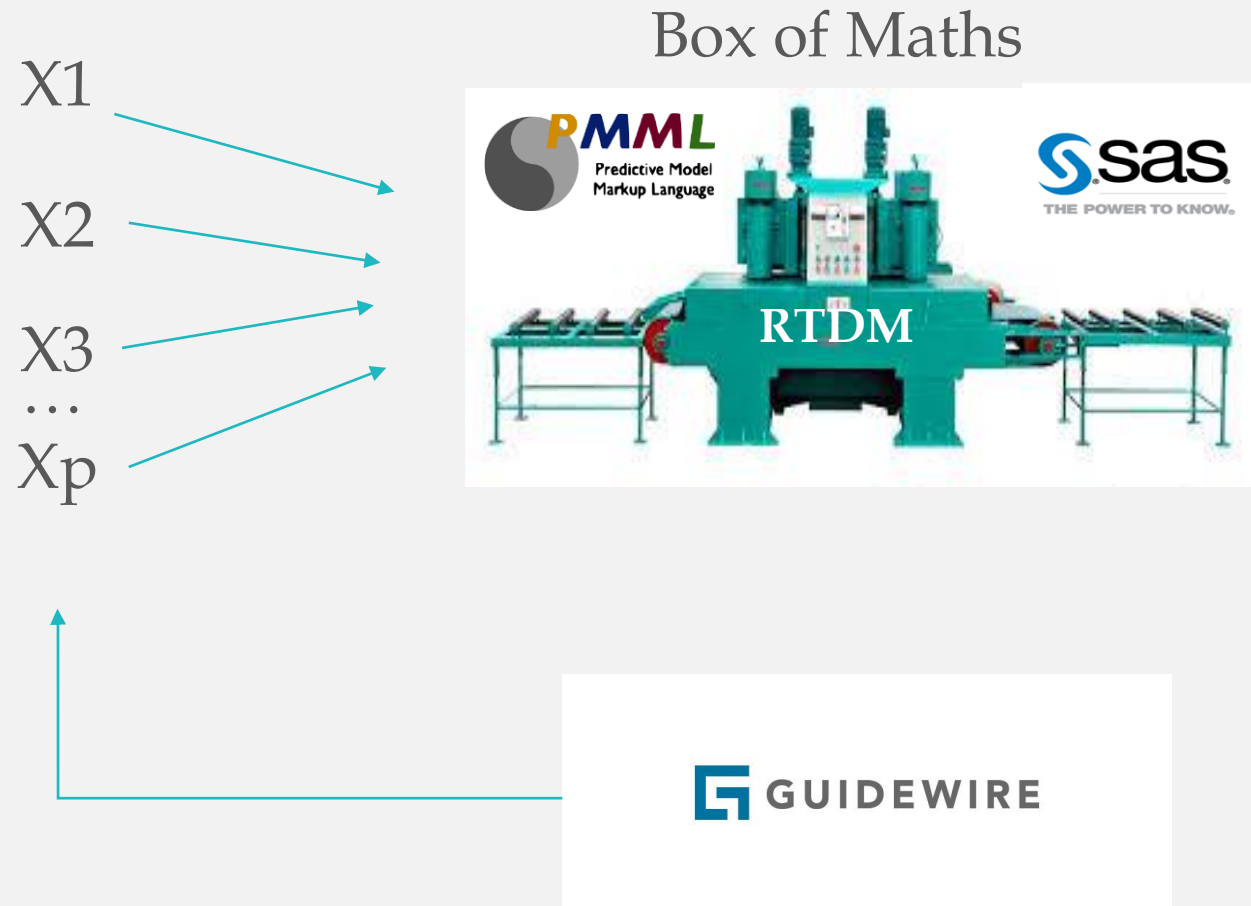
 GUIDEWIRE

# 1. Qu'est-ce que SAS ReaTime Decision Manager



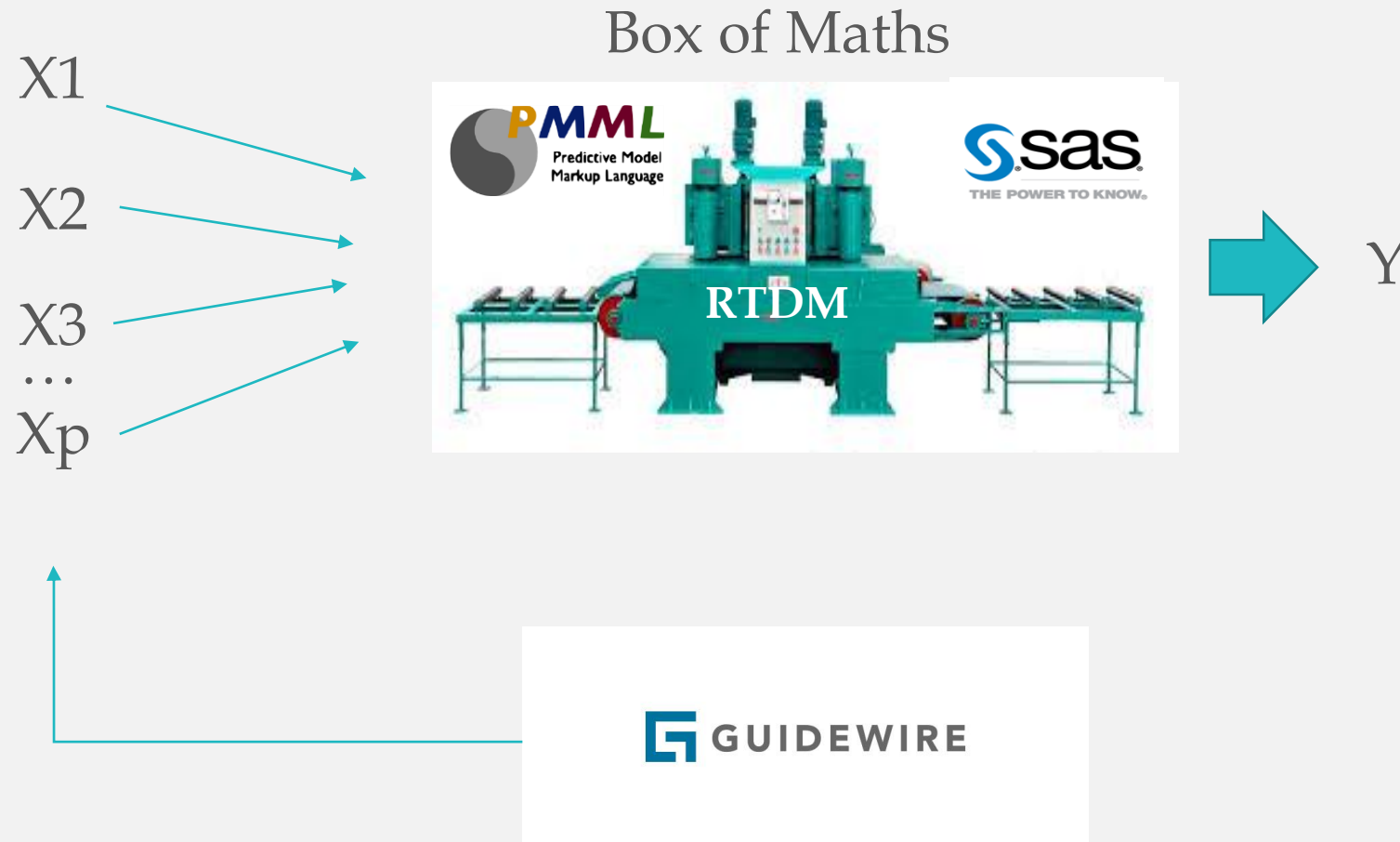
 GUIDEWIRE

# 1. Qu'est-ce que SAS Real Time Decision Manager

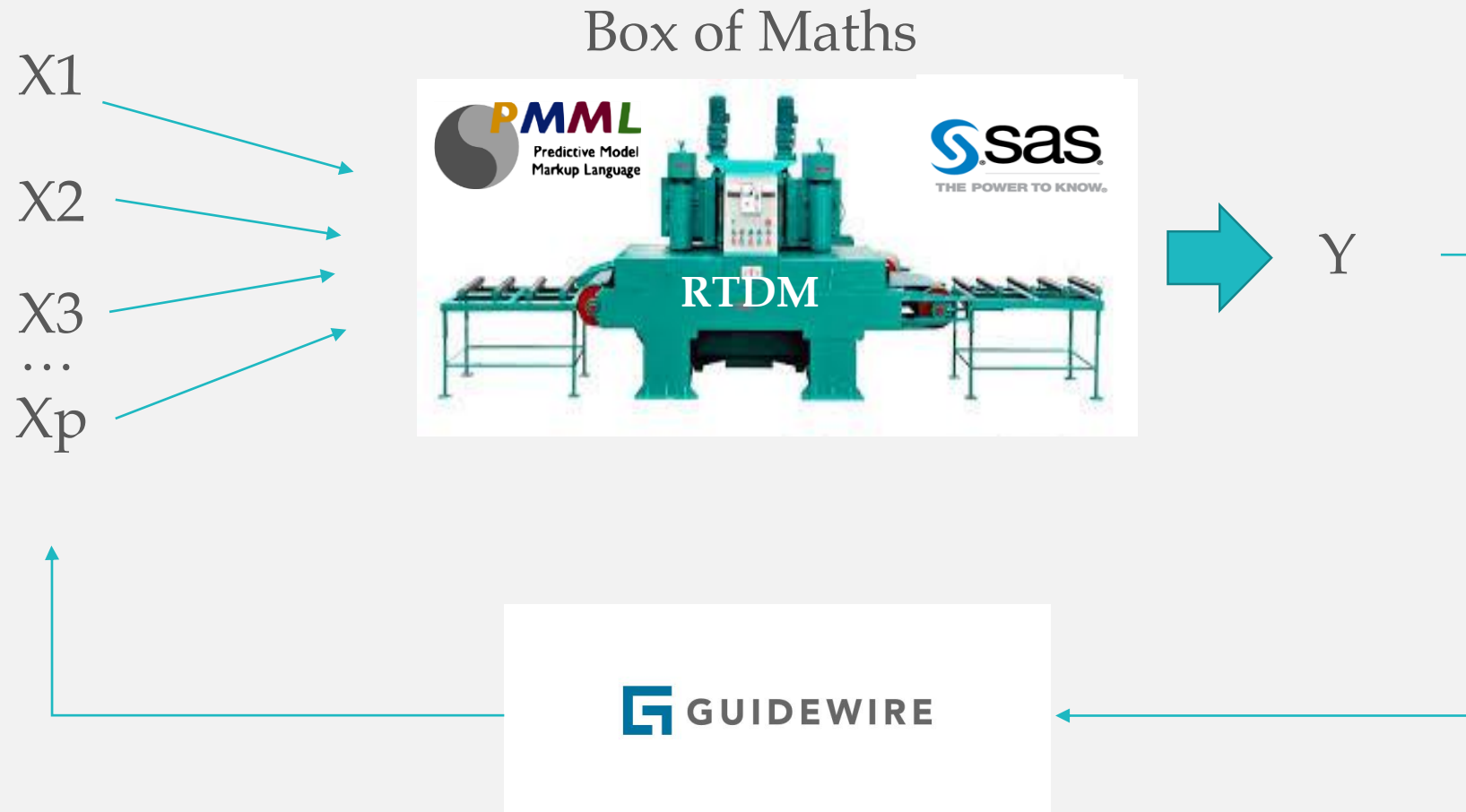




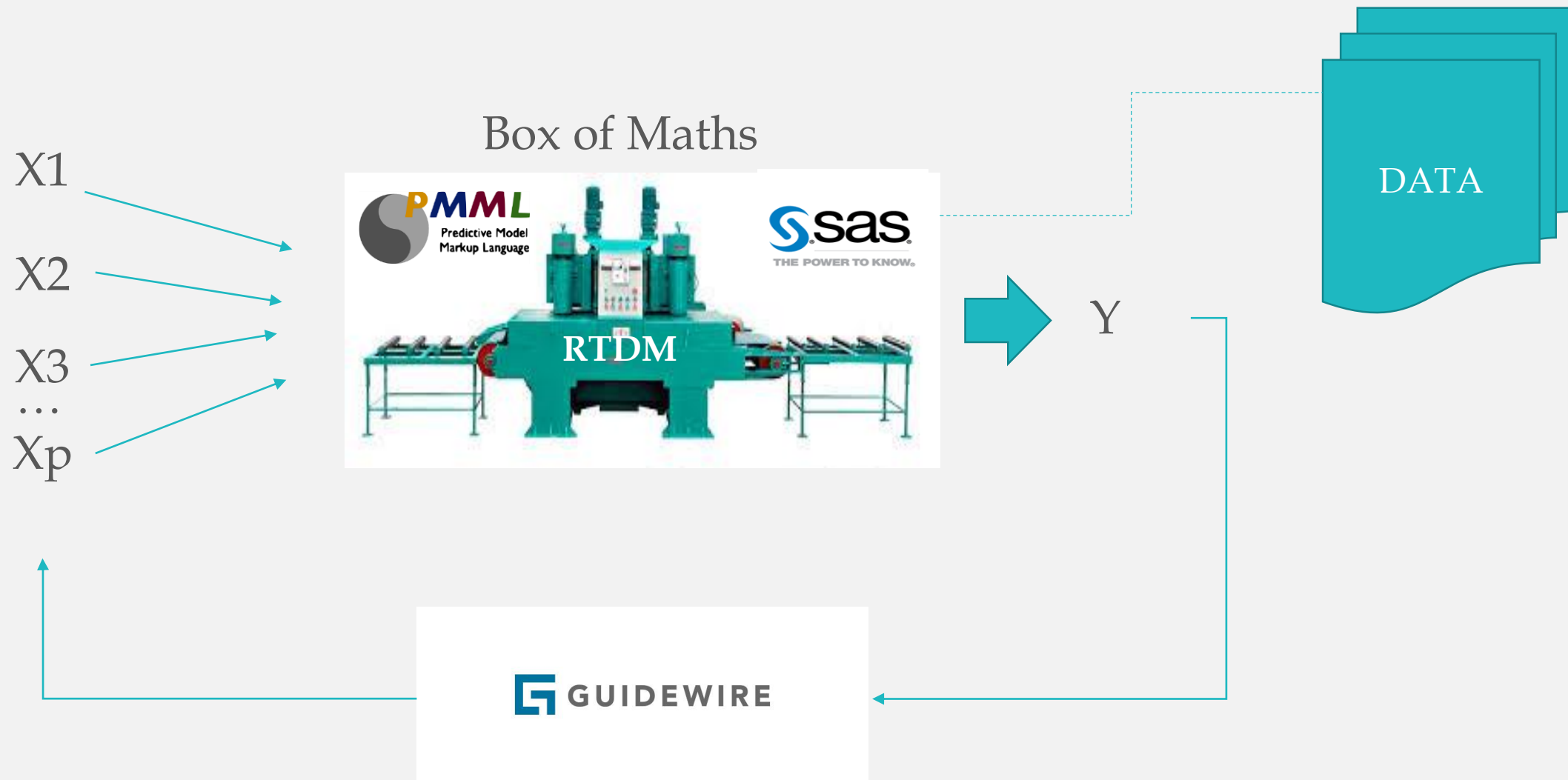
# 1. Qu'est-ce que SAS Real Time Decision Manager



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# 1. Qu'est-ce que SAS Real Time Decision Manager



## 2. Exemples d'utilisations :: Cession au RSP ::

- Contexte

- RSP = Risk sharing pool
- Qui permet à chaque assureur de céder 5% de ses pires assurés auto
- Distribution des résultats entre les assureurs selon leur part de marché

- Idée

L'assureur qui cède des risques pire que ses compétiteurs fait du profit avec le RSP

## 2. Exemples d'utilisations :: Cession au RSP (suite) ::



Extraction de données



Modélisation



Déploiement  
en temps réel

# 2. Exemples d'utilisations :: Cession au RSP (suite) ::



PolicyCenter

30+ Fields Pushed

- Charged Premiums by coverage
- Postal Code
- Credit score
- Deductibles & limits
- Driver age, gender
- Years licensed
- Vehicle alarm
- Vehicle age
- Vehicle rate group
- Number of drivers / Vehicles
- Accidents / Convictions surcharges

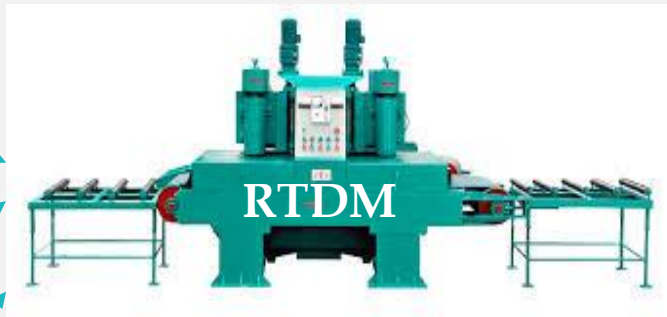


BillingCenter

NSF

| Policy No. | City    | Province | Country | Area | Time  |
|------------|---------|----------|---------|------|-------|
| T1X 101    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 102    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 103    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 104    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 105    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 106    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 107    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 108    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 109    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 110    | Calgary | AB       | Canada  | AB3  | 07:00 |
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| T1X 114    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 115    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 116    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 117    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 118    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 119    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 120    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 121    | Calgary | AB       | Canada  | AB3  | 07:00 |
| T1X 122    | Calgary | AB       | Canada  | AB3  | 07:00 |

Lookup Tables



RSP Eligibility Conditions

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Expected Profit

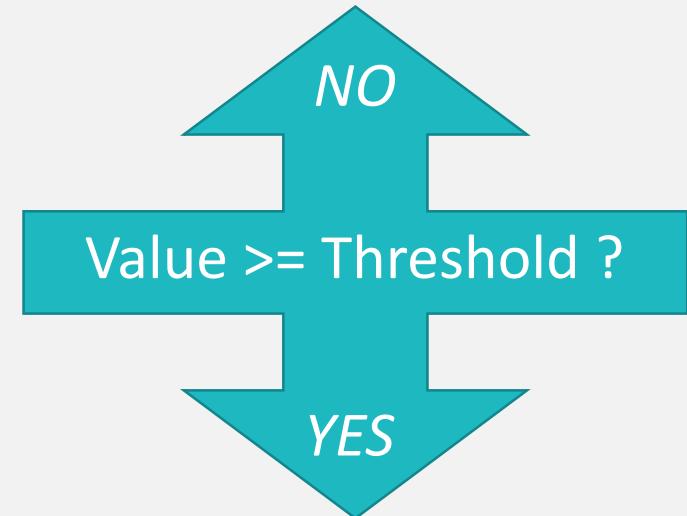
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Value of Ceding a risk to RSP

Vehicle Remains Covered by us



Vehicle is Ceded to the RSP



# 2. Exemples d'utilisations :: Cession au RSP (suite) ::



PolicyCenter

30+ Fields Pushed

- Charged Premiums by coverage
- Postal Code
- Credit score
- Deductibles & limits
- Driver age, gender
- Years licensed
- Vehicle alarm
- Vehicle age
- Vehicle rate group
- Number of drivers / Vehicles
- Accidents / Convictions surcharges

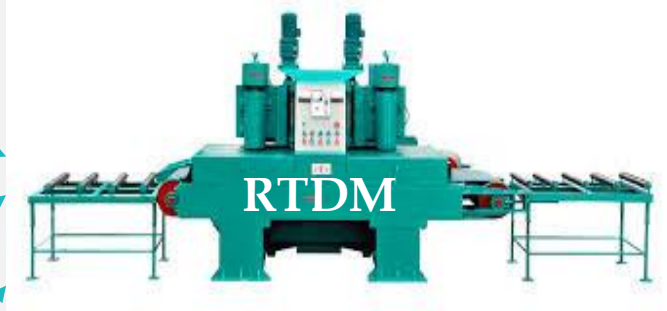


BillingCenter

NSF

| Policy No. | City    | Province | Country | Area | Time  |
|------------|---------|----------|---------|------|-------|
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| T1X 102    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 103    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 104    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 105    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 106    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 107    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 108    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 109    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 110    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 111    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 112    | Calgary | AB       | Canada  | 403  | -07-- |
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| T1X 118    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 119    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 120    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 121    | Calgary | AB       | Canada  | 403  | -07-- |
| T1X 122    | Calgary | AB       | Canada  | 403  | -07-- |

Lookup Tables



RSP Eligibility Conditions

+

Expected Profit

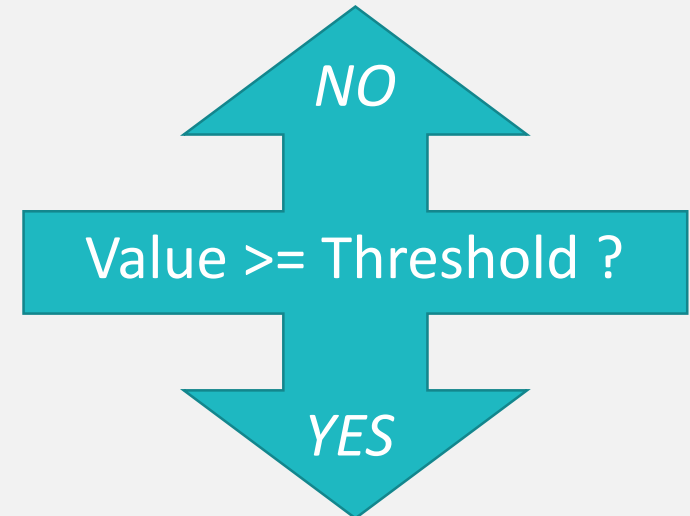
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Value of Ceding a risk to RSP

Vehicle Remains Covered by us



Vehicle is Ceded to the RSP



## 2. Exemples d'utilisations :: Codes d'activités ::

- Contexte

- Le code d'activité est une information cruciale pour tarifer en assurance commerciale
- Liste de 1302 codes provenant du BAC
- Une même entreprise examinée par 2 agents se retrouvera dans 2 codes différents

- Idée

Bâtir un outil d'IA pour recommander le code selon une description en texte



## 2. Exemples d'utilisations :: Codes d'activités (suite) ::



Extraction de données



Modélisation



Déploiement  
en temps réel

## 2. Exemples d'utilisations :: Codes d'activités (suite) ::

Guidewire PolicyCenter

Unsaved Work | English (Canada) | Help | About | Preferences | Log Out

Desktop | Account | Policy | Search | Team | Report

Go to (Alt+ /) Go

\* | Submission (Draft) | Commercial (Property and Casualty) | Eff. 26/10/2018 | JEN DUFFY | Account # 6679743335 | 4B

Submission 21694996  
Draft

Pre-Qualification  
Policy Contract  
Policy Info  
Operations  
Location  
Insured Items  
Location Coverages  
Liability  
Policy Coverages  
Questionnaire  
Risk History  
Risk Appetite

Search Operations (Return to Operations)

What is your operation? \* We serve food to everyone

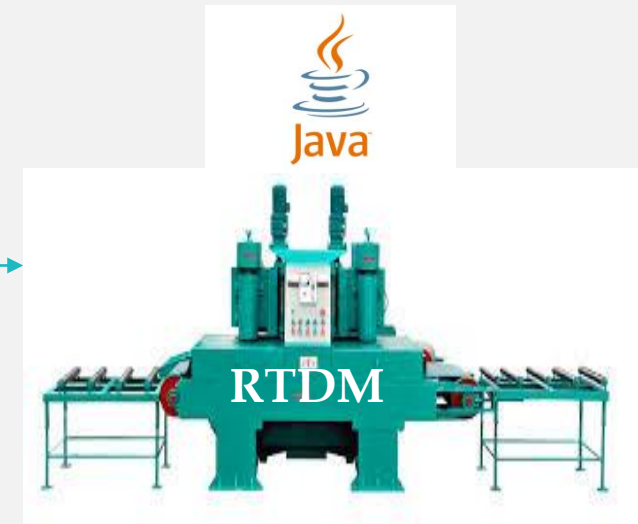
Group Restaurant

Show All Of This Group  Yes  No

Search

Add to Operations

| <input type="checkbox"/> | Description  | Code    | Group      | Risk Grade |
|--------------------------|--|---------|------------|------------|
| <input type="checkbox"/> | Fast food restaurant - not licensed                      | 5811b00 | Restaurant | M          |
| <input type="checkbox"/> | Refreshment Stands, drive-in restaurants                 | 5813b00 | Restaurant | L          |
| <input type="checkbox"/> | Catering / commissariat work                             | 7402a00 | Restaurant | M          |
| <input type="checkbox"/> | Family restaurant - licensed                             | 5812c00 | Restaurant | M          |
| <input type="checkbox"/> | Coffee shops, warming of food only, no roasting of beans | 5813a00 | Restaurant | L          |



## 3. Discussion

### Points forts

- À l'extérieur des systèmes
- Rapidité de calcul
- Ownership complet
- Speed to market
- Scalable
- Log des données de requêtes
- Temps réel 2.0 possible!

### Leçons apprises

- Besoin des TI pour config. + API
- Planifier l'installation rigoureusement
- Besoin de BI pour transformations, liens systèmes/ data externes, etc.
- Traduction des modèles non-SAS (PMML, Java, exploration de EM)
- Bien s'entourer (formation, chargé de projet, consultants, etc.)

Merci beaucoup!

[frederick.guillot@cooperators.ca](mailto:frederick.guillot@cooperators.ca)

