



UK Symposium on Knowledge Discovery and Data Mining 2017



Maximizing the Business Impact of Discovered Knowledge

Hints and tips for those looking to cross the chasm between analysis and action

A focus on Business Impact takes us beyond the Science of KDD

We must also master the art of applying and managing knowledge



- Do the Right 'It'



- Drive Intelligent Action



- Become a Learning Organisation

Sky's IDS team are a world class decision support organisation

Business Partner Teams underpinned by Centres of Excellence

Trading

*Get, Keep
& Grow
Customers*

Product

*Strategy
Design &
Performance*

Content

*Acquisition
Commissioning
& Performance*

Service

*Operations
& Service
Performance*

NowTV

*Insight to
support e2e
OTT business*

Advertising

*Linear & Targeted
Placement &
Performance*

Executive

*Strategic
Regulatory
Investors*

ANALYTICS

Decision Science Hub including predictive analytics, data science and econometrics

OPERATIONS & DEVELOPMENT

Reporting development integrated with other exploitation development activities

PRIMARY RESEARCH

Improved research capability offering opportunities for lower cost in-housing

TECHNOLOGY DATA SERVICES

Dedicated data management provided by Sky Technology

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Operational Demand and Output Volumes Summary

Reporting Production

| Business Area | Reports Per Month |
|---|-------------------|
| SMG - BB & Talk | 424 |
| SMGTV, Content & Internet Products | 411 |
| Customer Operations - Sales | 1227 |
| Customer Operations - Service | 1027 |
| Customer Operations - Service Quality and Billing | 217 |
| Customer Service Change Projects | 211 |
| Customer Service Group - Strategic Initiatives | 113 |
| eExperience | 5 |
| Finance & Executive Group | 732 |
| Home Service and Supply | 387 |
| Sky Business | 173 |
| Trading - Customer Management | 883 |
| Trading - Existing Sales | 28 |
| Trading - New Sales | 740 |
| Trading - Republic of Ireland | 686 |
| Misc | 245 |
| Now TV Subs | 71 |
| Content Performance | 130 |
| Media Performance inc AdSmart | 847 |
| Dashboards - Retention, Digital, Bespoke | 30 |
| Total | 8587 |

Commissioned Outputs

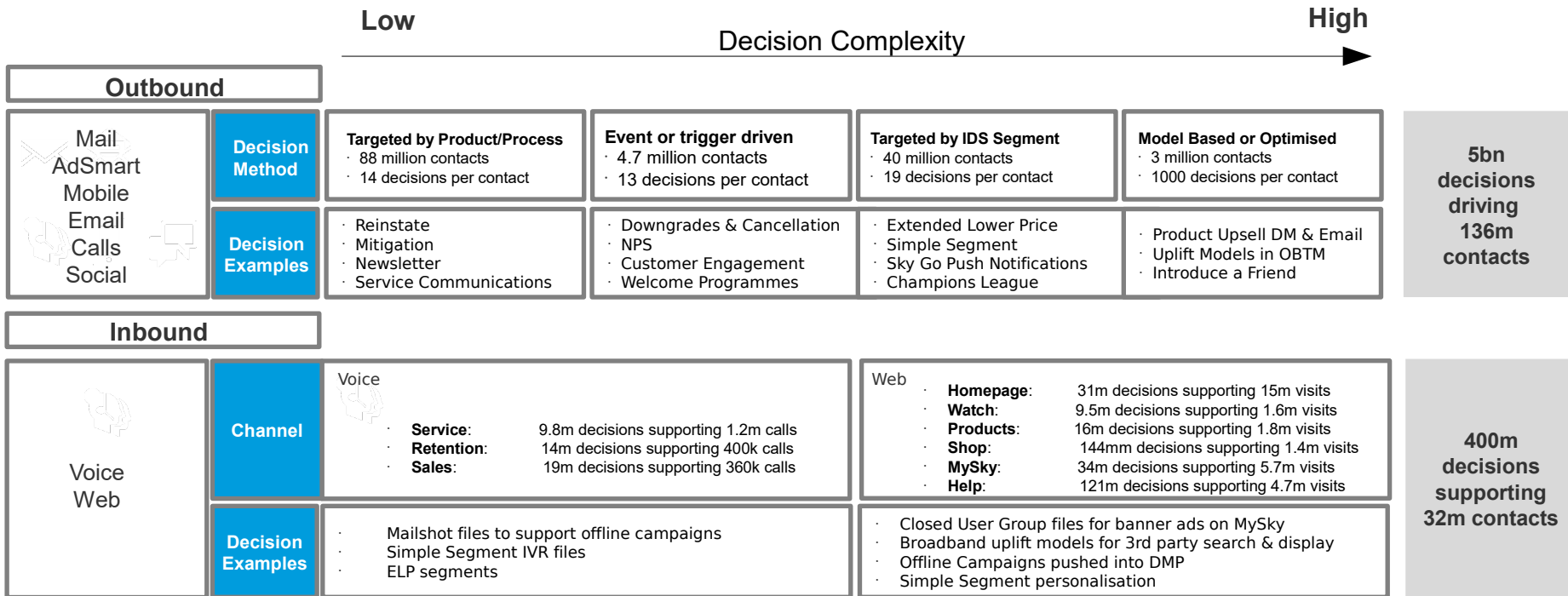
| Activity | Outputs Per Month |
|---|-------------------|
| New Reporting developments (pipeline = 400) | 70 |
| Market Research projects | 45-50 |
| Ad Hoc Media research projects | 5-10 |
| Content Research projects | 20 |
| Analytics projects (> 1 day) | 40-60 |
| Modelling projects | 5-10 |
| Econometrics projects | 2-3 |

Targeted Campaigns & Decisioning Outputs

| Activity Channels: Email, Dmail, Call Centres, Online, AdSmart | Volumes Per Month |
|--|-------------------|
| New briefs each month from 55 Business teams | 300 |
| Targeted campaigns delivered | 650-750 |
| Targeted customer contacts | 170m |
| Decisions calculated for targeted customer contacts | 5bn |

Our current decision execution capability is coordinated and immense

We make >5bn data-based decisions supporting 170m intelligent contacts every month





Do The Right 'It'

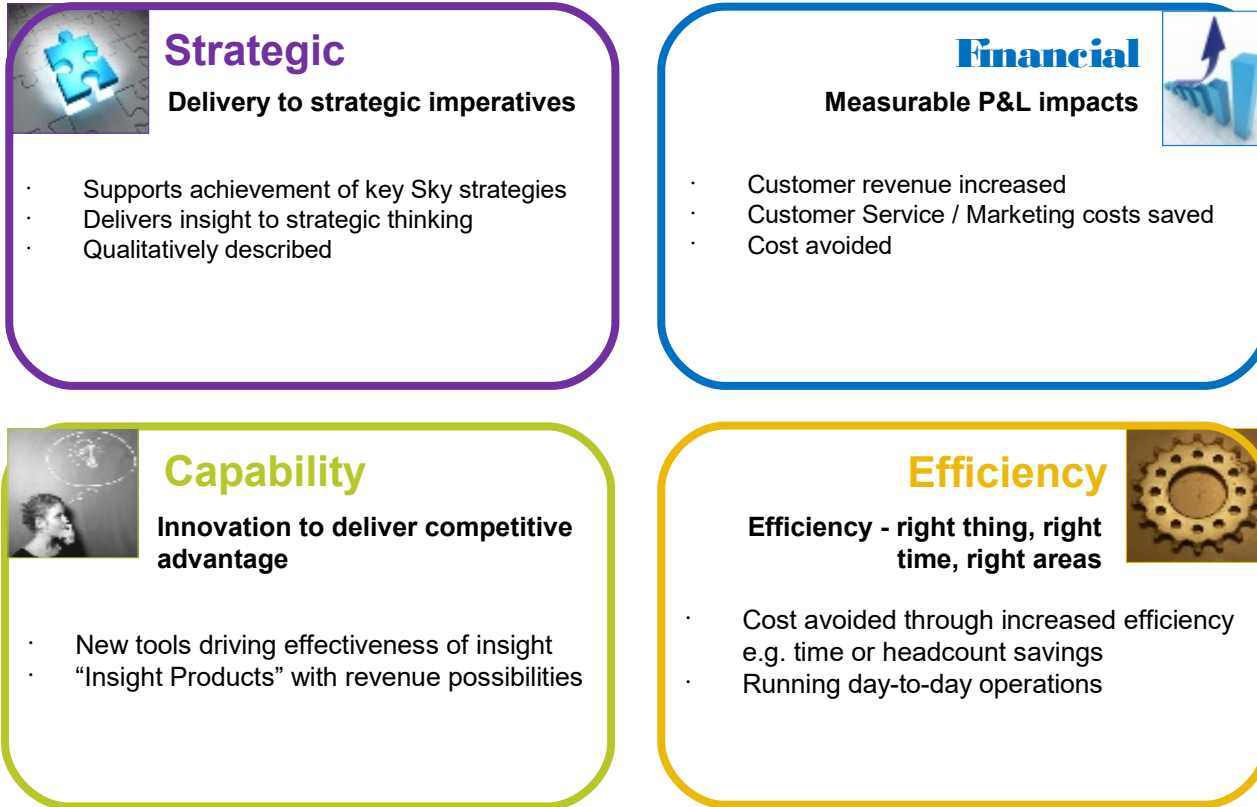
In most corporations 'Right' is defined by identifiable and actionable value opportunities

- Anchor the investment of our intellect on business strategy
- Incorporate business understanding into the insight process
- Demonstrate the value of insight in financial terms

| Rights Negotiations | Get, Keep, Grow | Engagement Strategy |
|--|--|---|
| <i>Combining business perception of content performance with precise measurement of viewing & approved value metrics</i> | <i>Developing a common framework within which competing customer strategies can be developed, implemented and assessed</i> | <i>Ensuring the 'Best Next Action' is designed and deployed in the context of the broader Customer strategy to drive demonstrable value</i> |

Do The Right 'It'

An example Balanced Scorecard for measuring the value of insight investment



Drive Intelligent Action



You must consciously manage the gap between knowledge and intelligent action

- Create a culture where insight's raison d'etre is to drive decisions
- Focus on an omni-channel intellect to drive customer-centric actions
- Develop actions that are timely & measurable to enable learning

In-session Decisioning

Incorporating offline models into the online experience and factoring in online behaviours into decision making

Content Consumption

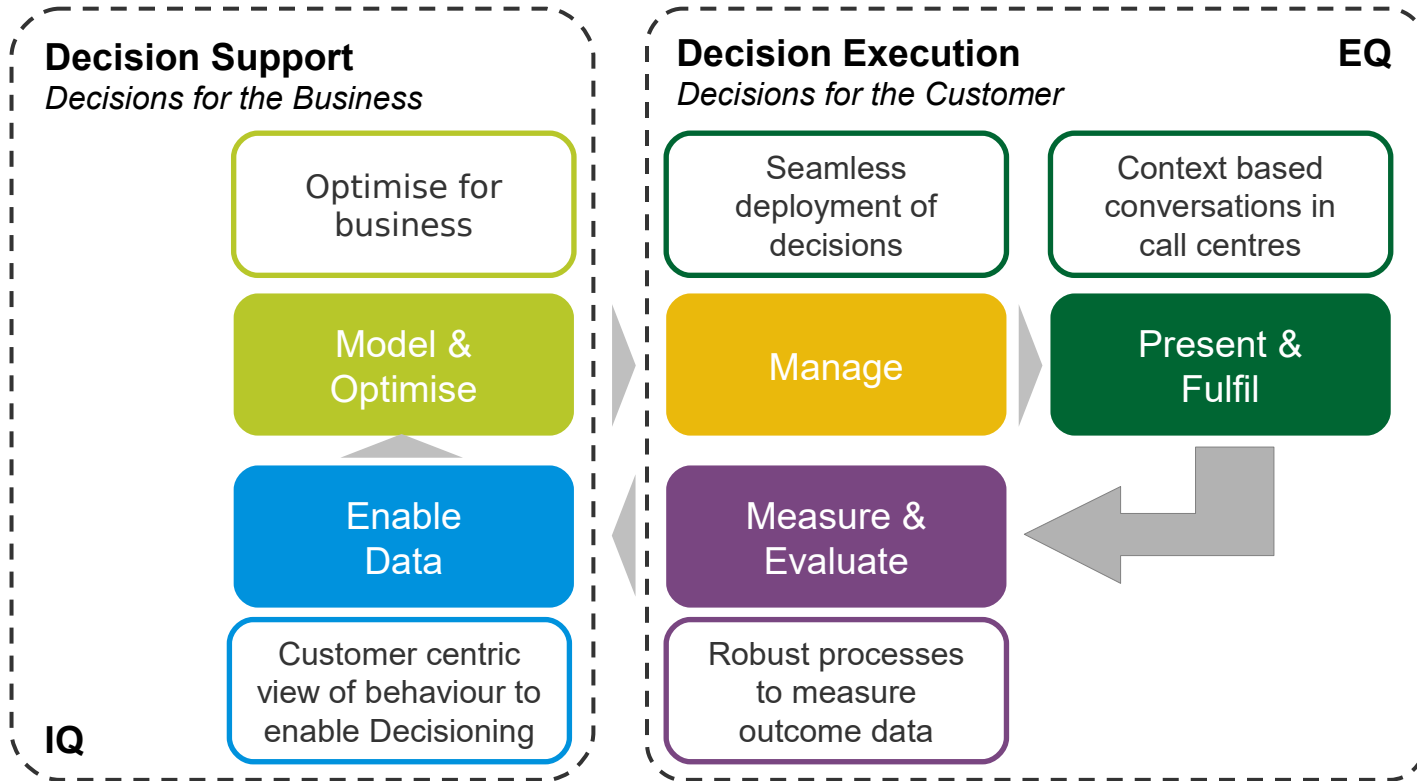
Driving precision into measurement to enable better diagnostics and Inform treatment strategies

Price Elasticity & Churn

Integrating customer-centric intelligence into operational processes to drive pro-active value strategies and minimise wastage

Drive Intelligent Action

An illustrative decisioning architecture to support deployment of intelligent actions





Become a Learning Organisation

Actions become much more valuable if you are able to learn from them!

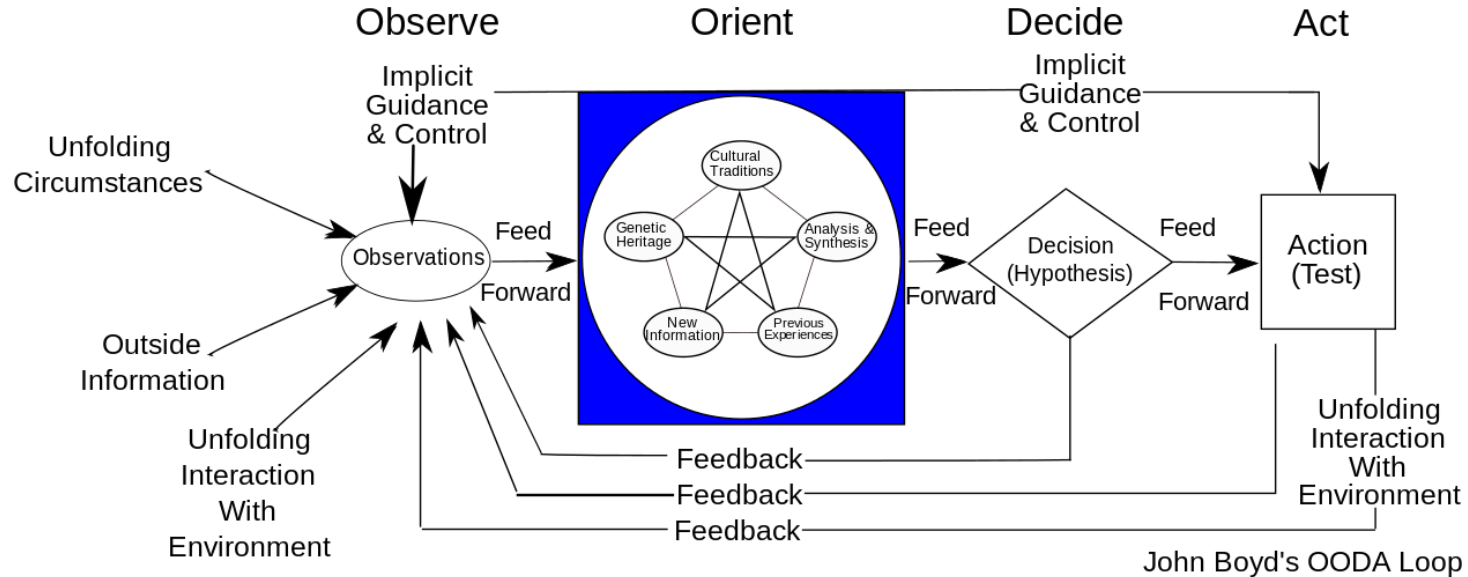
- Integrate functions that describe, diagnose, predict and prescribe
- Accept that anything you do is based on what you currently know
- Develop and maintain a publishable library of what you know

| Self-Service Insight | Corporate Memory | Model & Manage Root Cause |
|--|--|---|
| <i>Providing a single version of the truth for key business metrics and ability to perform what-of and Descriptive analysis 'on the fly'</i> | <i>Productise story-telling & create tools that enable the cataloguing and exploration of what is known in order that the business may learn</i> | <i>Design your modelling practice with the explicit intent of changing the drivers of underlying behaviours & influencing future outcomes</i> |

Become a Learning Organisation



True learning is based upon knowing what you know and a willingness to adapt



Mastering the Art of Applying and Managing Knowledge



- Do the Right 'It'

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