Power to the people

How Which? is using KNIME

Mike Seery Head of Digital, Which?
Stefan Weingaertner, Dymatrix
WHAT IS WHICH?
WHICH? IN NUMBERS

- Which? is the UK’s **bestselling** monthly magazine with 674,000 subscribers.
- We have revenues of **£84m**.
- In 2013 companies spent **£100m** on advertising containing our Which? Best Buy, Recommended Provider and Award icons.
- We ran the UK’s first collective energy switch which generated a total of **£8.4m savings** for 38,000 people.
- Which? spends more than **£4m a year testing over 3,000 products**. We test products the way people use them!
DIGITAL EXPERIENCE “BLUEPRINT”
FUTURE OF WHICH?

“Which? needs to move on”

“It’s a bit of a no-brainer”

“Which? needs to set the standard”

“Which? should have this already”
WHICH? REVIEWS

TVs rebooted

Monday, 17 February 14
SASHIMI BETA

- Thin slice - TVs
- Differing perspectives - owner reviews
- Full market coverage
- Favourites
- Multiscreen
- No need for people to use competitors
- Price alerts
- Price prediction
PROTOTYPE 12 WEEKS

- Throwaway
- Cloud based:
  - Heroku
  - AWS
- Ruby on Rails
- Scala
- RDF
- MongoDB
- APIs
- Data Feeds
  - Reevoo
  - Pricerunner
  - Etalise
- Responsive

Monday, 17 February 14
BUYING DECISIONS THE IMPORTANCE OF PRICE

- **Meets needs**. Does is do what I want? Is the TV good for sport, for example?

- **Value**. Is it reliable? What is the picture like? How much energy does it use?

- **Peer & expert views**. Do my friends own one? What do people that own one think?

- **Price**. Where can I buy it cheapest? When is a good time to buy?

“Proportion of shoppers claiming that price was ‘extremely important factor in store choice’ rose from 40% in March 2011 to 48% in March 2012.”

IDG 2012
It's a good time to buy
Price expected to remain stable. What does this mean? 

Today's best price
£799.00
at Pixmania

Our price predictor uses trends in historical pricing data to determine our prediction on whether we think the price of a product is likely to go up, go down, or remain stable over the next seven days. It's obviously not a definitive verdict because we have no control over how prices are set or when sales are likely to occur, but it should go some way towards helping you make your purchasing decision with more confidence.
OVERVIEW DAILY PRICING PREDICTION PROCESS

Price Crawler (PriceRunner)

Scheduler ➔ Downloader & Parser ➔ XML File Storage

Downloader & Parser ➔ Text and Metadata

Queue

DynaMine Pricing Prediction

KEY FEATURES
Process runs every night
Big Modeling: Training and Deployment of hundreds of models within one(!) hour
Analytical Engine: KNIME Server

Upload to Which? Website (XML File with Pricing Predictions & Forecast Charts)
DATA FEEDS PRICING, RETAILER, SPEC. DATA

Daily Manufacturer & Product Details

Daily Retailer Details & Prices

Quality assure and integrate daily XML files into historized data model
Monitoring of accuracy and precision of Pricing Predictions
SASHIMI BETA FEEDBACK

- 86% of people were very or fairly satisfied with the beta overall
- 92% rated the site excellent or good for the quality of product images
- 87% rated the site excellent or good for the speed and responsiveness
- 86% rated the site excellent or good for the overall appearance

“This is a huge improvement in looks and usability. I had been thinking of cancelling my subscription because so many of the reviews were for old models that it was becoming irrelevant but I think I'll continue for now and see how we go. Good work.”

Which? Member

Monday, 17 February 14
- 10 most popular products by July 2014
  - TVs, washing machines, dishwashers, steam cleaners, laptops, tablets, printers, vacuums, washer dryers, tumble dryers, fridge/freezers, boilers
- Other categories over the following 12 months. Lawnmowers to mattresses (and anti-virus software!)
- Increase in coverage (i.e from 70 laptops to >1,000; from 67 tablets to 150, etc.)
PRICE PREDICTION NEXT STEPS

- **Improve** time window

- Use **additional data** series to allow us to do this

- Implement **alerts** based on price prediction changes
THANK-YOU QUESTIONS?

Mike Seery
mike.seery@which.co.uk
@ohrockyrocky

Stefan Weingaertner