Who may attend: Everyone

Speaker(s): Denis Vuckovac, Researcher, Auto-ID Labs ETH / HSG
Anti-trust caution

• GS1 operates under the GS1 anti-trust caution. Strict compliance with anti-trust laws is and always has been the policy of GS1.

• The best way to avoid problems is to remember that the purpose of the group is to enhance the ability of all industry members to compete more efficiently.

• This means:
  - **There shall be no discussion of prices, allocation of customers, or products, boycotts, refusals to deal, or market share.**
  - If any participant believes the group is drifting toward impermissible discussion, the topic shall be tabled until the opinion of counsel can be obtained.

• The full anti-trust caution is available via the link below, if you would like to read it in its entirety: [http://www.gs1.org/gs1-anti-trust-caution](http://www.gs1.org/gs1-anti-trust-caution).
Auto-ID Labs are GS1’s research partner and focus on «Internet of Things»

- Auto-ID Labs are research partners of GS1 and our research focus is the “Internet of Things” in the retailing context.
- Located at top-ranked universities:
  - Cambridge, UK
  - MIT, USA
  - ETH + HSG, CH
  - Fudan, CN
  - KAIST, SK
  - Keio, JP

Sources: www.autoidlabs.org
Auto-ID Labs are GS1´s partner for IOT-related research

Auto-ID Labs ETH / HSG in Zurich

Our Team

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The Global Language of Business

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Fashion and trends have changed...

1920

1950

1970

1990

2016
...and so has the way people shop
Not about a single transaction but building a relationship – learn and implement

**E-commerce**
- How much is shipping?
- Does size M fit?
- Can I send it back if not? For how much?

**Physical Retailing**
- Where can I get these jeans?
- Do you have size M in stock? Maybe in the warehouse?

**Customers**
- How can we improve recommendations?
- How much are my customers sending back? How can we reduce that?

**Businesses**
- Who are my customers? What do they like?
- What is in stock?
- How can we measure lost sales?
Levers to improve the customer experience and build a relationship

- Make eCommerce more like brick-and-mortar
- Make brick-and-mortar more like ecommerce
- Improve data quality
Lever 1: Data Quality

Make eCommerce more like brick-and-mortar

Make brick-and-mortar more like ecommerce

Improve data quality
From crowd-sourced to curated product databases of already available data

Grocery

Apparel

zalando
Lever 2: Improve eCommerce

Make eCommerce more like brick-and-mortar

Make brick-and-mortar more like eCommerce

Improve data quality
Bodylabs: Unlocking the human body as a platform using AI and machine learning

Body Labs blue
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For getting fit right.

START TRIAL NOW!

64% blame fit as major reason for returning clothes.
85% would purchase more if fit was not an issue.
23% of all clothing gets returned.
40% reduction in returns for early users of Blue.
Fashwell: AI for product recognition, recommendation and user profiling

Powerful image recognition for the fashion industry

DEEP LEARNING
Cutting edge deep learning algorithms specifically tuned for fashion recognition.

FASHION FOCUS
Real world training data yielding customer satisfaction beyond mean average precision.

RESEARCH
ETH Zurich spin-off with excellent network in academia, published one of the first articles on fashion image recognition.

TEAM
Engineers who can separate a tote bag from a clutch, supercharged by e-commerce experts with a heart for tech.

Automatically extract every layer of information and improve product recommendations
Solving the “where did you get that” and the “what is your style” problem

Technology

Our proprietary deep learning pipeline automatically extracts every layer in an image.

- IMAGE & OUTFIT ANALYSIS
  - gender, age, person count
  - image type (e.g. fashion vs food)
  - scenery (e.g. beach)
  - outfit style (e.g. street style)

- PRODUCT RECOGNITION
  - Dynamic linking of fashion items to online shops
  - Personalization of recommendations

- USER PROFILING & AUDIENCE ANALYTICS
  - fashion taste recognition
  - engagement analytics
  - what else do they like
Lever 3: Improve physical retail

Make eCommerce more like brick-and-mortar

Make brick-and-mortar more like eCommerce

Improve data quality
Bringing the benefits of eCommerce, such as personalization, to physical retail

**Physical Cookie**

- 0,17€ COST PER COOKIE
- +21,7% TIME SPENT INCREASED
- +14,5% FLOOR-TO-FLOOR CONVERSION IMPROVED

www.physicalcookie.com

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**Observational Learning**

Smart Hanger with popularity information

Displaying number of likes can increase sales by ~13%

The Impact of User-Generated Content on Sales: A Randomized Field Experiment, Grahl et. al 2014
Outlook: Solving the privacy dilemma - run recommendations on data you never see
Agenda

• Introduction

• How we shop today

• Making websites ‘search engine friendly’
E-Commerce today

70% of all sales are influenced by information consumers find on the web.

Whether you’re a brand or a retailer, now is the time to make the information about the products you sell visible and accurate.
Where buyers shop

Mobile Share of Shopping Sites

- USA: 54%
- UK: 65%
- Brazil: 33%
- Russia: 23%
- France: 35%
- Germany: 48%
- India: 52%

Data by SimilarWeb

Mobile Web Data: Jan 2016
How do buyers shop

Mobile

• Google
How do buyers shop

Mobile

• Google
• eBay
• Amazon
eBay Today

- 162 million active buyers
- 800 million listings worldwide
- 314 million mobile app downloads
- Click and Collect at 800 Argos stores
Amazon today

- 244 million active customer
- 54 million Prime customers
- 44% of buyers start their search on Amazon*
- 48% products sold by marketplace retailers
- Growing at 36% (2x Ecommerce)

* http://venturebeat.com
Marketplaces want Product GTINs...

For many years  
From 2015  
From May 16th 2016
Beyond mobile

Screenless devices

• Wearables

• Amazon Echo
  (Now over 3 Million sold)
How do consumers search the web today?

- Type words into search
- Speak into device
- Use location-based searching
- TV content provider
- Apps
What about searching for products?

“red ballet shoes size 6

Retailer app

“Add carrots To my online order”

Nearest shop selling...

Latest “Star Wars”
Unique Product Identification: GTINs
E-Commerce today

70% of all sales are influenced by information consumers find on the web.

Whether you’re a brand or a retailer, now is the time to make the information about the products you sell visible and accurate.
What is GS1 SmartSearch?

“I so completely trust the information about this product that I know exactly what it is I will be having delivered, and I know that I won’t have to return it unless it’s faulty.”

The Customer
What is GS1 SmartSearch?

A new GS1 standard that makes it easier to keep information about products visible across the web in:

- Search engines
- Manufacturer and retailer websites
- Social media
Why is GS1 Smart Search needed?

It is **difficult** for companies to keep information about the products they make or sell visible across the web because products are not consistently accurately identified in a common machine-readable format.

- **Search engines**
- **Manufacturer and retailer websites**
- **Other digital channels such as:**
  - Websites that contain product information (price comparison, etc.) and social media
How does GS1 SmartSearch help?

**Current Situation:** online product information is not provided consistently in a structured, machine-readable format.
How does GS1 SmartSearch help?

With GS1SmartSearch: computers can understand and process product information consistently.

- Manufacturer / Brand Owner / Retailer
- Search Engine / App
- Consumer

- Contextual and accurate search results will help me be more relevant.
- Now they’re speaking my language!
- Now I can link all the data about 00614141003211 together!
- And all this helpful information makes it easy to decide.

Purple Shoe
00614141003211
Product ID number (GTIN) plus structured product data

search results
Purple Shoe
$74.97 Store A
$79.97 Store B
$89.97 Store C
See all stores

The Global Language of Business
How GS1 SmartSearch works

By adding **structured product information** to your web pages...

... you help search engines display **more relevant search results** to your consumers...

... which leads to **more click-throughs** to product pages and **more sales**.
What does it look like to search engines?

To search engines, a web page with GS1 SmartSearch contains structured data it can easily add to its index.

**Without GS1 SmartSearch**

**Product Data**
- Fast Runner Colour Purple
- Girls Style 33-42 Size

**With GS1 SmartSearch**

**Product Data**
- **Product Name** = Fast Runner
- **Colour** = Purple
- **Style** = Girls
- **Sizes available (EU)** = 33-42
- **GTIN** = 00614141003211
Endorsement of schema.org

First schema.org external extension
How does it really work?

Product Description
Deliciously crunchy Os, with 4 delicious whole grains, a source of Vitamin D and a source of calcium. Say Yes to Cheerios!

Become a fan @ www.facebook.com/CheeriosUK
8 Vitamins & Iron. Source of Calcium & High in Fibre.
Check out our Facebook page @ www.facebook.com/CheeriosUK for exclusive Cheerios content!

Deliciously crunchy Os, packed with 4 whole grains. Say Yes to Cheerios!
What does it look like to consumers?

To consumers, a web page with GS1 SmartSearch looks no different from a page without.

Without GS1 SmartSearch

Girls Purple Running Shoe ★★★★★
From JayPop Shoes

With GS1 SmartSearch

Girls Purple Running Shoe ★★★★★
From JayPop Shoes
GS1 SmartSearch benefits

**Increased sales through:**

- More relevant search results
- More detailed and accurate product information displayed in search results
Links to recreate examples.
(If you use a browser where you are logged into a Google account, or you use a site other than google.co.uk, results may differ).
Scenario 1: Improve the ranking of the “Shreddies” breakfast cereal by inserting it into the product pages of the brand owner and an online grocery retailer

- When you search ‘Shreddies’ on google.co.uk, the cereal did not appear on the first page of results (Jan 2016).
- GS1 SmartSearch added to page on brand-owners website and on Tesco product page using simple server-side include from separate text file containing pre-authored GS1 SmartSearch structured data.
- 3 weeks later, Shreddies pages rank 5th and 6th in organic search (24 March 2016, http://google.co.uk search, not logged in with any Google account – logging in can change rank based on previous individual searching history).
- We expect ranking rise to continue with time.

Shreddies
www.myshreddies.com/
Shreddies flatulence filtering garments are the perfect way to treat flatulence issues. The garments feature an activated carbon lining that absorbs all flatulence ...
Flatulence • Mens • Ladies flatulence • Media

Flatulence Underwear — Shreddies
www.myshreddies.com/flatulence/
Shreddies award winning flatulence filtering garments offer maximum comfort, classic styling and flatulence filtration. Whether you suffer from excessive ...

Flatulence Info — Shreddies
www.myshreddies.com/about/
Shreddies have activated carbon cloth (called Zorflex) sandwiched between layers of regular fabric. The specialty layer absorbs and traps the odour before it ...

Shreddies - Wikipedia, the free encyclopedia
https://en.wikipedia.org/wiki/Shreddies
Shreddies is a breakfast cereal made from lattICES of wholegrain wheat. Contents . (hide), 1 Manufacture; 2 Flavours; 3 Advertising, 3.1 Canada; 3.2 United ...
Manufacture • Flavours • Advertising • Collectables

Shreddies | Nestlé Cereals
https://www.nestle-cereals.com/uk/our-cereals/cereal-brands.../shreddies
Shreddies come in all kinds of scrumptious flavours: yummy Original, irresistible Honey, scrummy Coco and Frosted and delicious Coco Caramel flavour too!

Nestle Shreddies Cereal 750G - Groceries - Tesco Groceries
www.tesco.com/groceries/product/details/?id=258221660
Whole wheat fortified malted cereal. Whole grain goodness weaved into delicious squares, for a satisfyingly crunchy bite! Follow the Shreddies Knitting ...
Scenario 2: Create a brand new product web site and use only GS1 SmartSearch to cause its pages to rank highly amongst incumbents.

- We built a web site using products from Tesco Direct catalogue obtained through affiliate relationship.
- Pages were split into four ‘modes’ – each product page was written in one of four formats:
  1. ‘Classic’ HTML only
  2. HTML plus GS1 SmartSearch
  3. GS1 SmartSearch only, with JavaScript using the data to write HTML so the product data is visible
  4. Nothing! GS1 SmartSearch pulled in from external file, then GS1 SmartSearch writing HTML.
- Evidence shows that Mode 2 - HTML plus GS1 SmartSearch – works the best for page ranking. Modes 1 & 3 ranked poorly and Mode 4 did not rank at all.
Scenario 2: I find an iron I like at a retailer’s site but I want to find out price and availability across the web. So I copy the full product description and paste it into Google:

Breville Vin170 Steam Generator Iron 2400w

About 981 results (0.31 seconds)

Breville Extreme Steam VIN170 Steam Generator - 2400 Watts
www.amazon.co.uk/Breville...Steam-VIN170-Generator/dp/B0078X7ZO...
★★★★★ Rating: 3.3 - 115 reviews
The Breville VIN170 steam generator iron produces twice as much steam as a basic ... The Breville VIN170 Extreme Steam Digital 2400W Steam Generator ...

Breville Extreme Steam VIN170 Steam Generator - Amazon ...
www.amazon.co.uk/Breville...Steam-VIN170-Generat.../B0078X7ZO...
I've reviewed and used several steam generator irons over the past few years, Morphy Richards, Phillips being the best of the bunch. Breville isn't a brand I'd ...

Breville Extreme Steam | 2400w Steam Generator Iron | Free ...
www.breville.co.uk/vin170-2400w-extreme-steam-digital-steam-generat... The VIN170 2400w Steam Generator Iron is the most powerful in the Breville Extreme Steam range, and provides optimal performance to reduce your hard ...

Steam Generator Irons - Breville
www.breville.co.uk » Products
The Breville Extreme Steam steam generating iron range delivers the highest iron ... Breville VIN170 Extreme Steam 2400w Steam Generator Iron - Rear ...

Breville VIN170 Reviews - Compare Prices and Deals ...
https://www.reevoo.com/p/breville-vin170
★★★★★ Rating: 1/10 - 1 vote - Price range: £111
Breville VIN170 Iron Reviews: reviews - Ask an Owner. This steam iron is a good all rounder. ... Breville Extreme Steam VIN170 Steam Generator - 2,400 Watts.
Scenario 2 (continued): I find lots of retailers stock this product. So I refine my search by adding a colour & that I want it to be free-standing (these attributes are clear in structured data on our site):

Breville Vin170 Steam Generator Iron 2400w black Free-standing
Work with GS1 New Zealand Board Members to take a product from their retailer site – then get better ranking on GS1 NZ web site!
GS1 SmartSearch summary

• **Consumer Promise**
  • Trust
  • Confidence

• **Business Case**
  • Search engine friendly web site
  • SEO relevance & accuracy
  • Low risk
  • Front end development
  • Increase sales
  • Reduce returns
Thank You!