EcoNOB
Tune Your Future

LT-ACCELERATE

Focus on what truly matters!

Measure
Customer
Satisfaction
in Social Media

LingRep

Text Analytics

Determine a <u>customers' attitude</u> towards a certain <u>product or service</u> by <u>interpreting (textual) information</u> according to a <u>predefined goal</u>.

- **What** is the Product?
  - Device, Service, Food, Software, …

- **Who** is the Customer (Speaker)?
  - Expertise, reasons for feedback, …

- **How** is Satisfaction formulated and quantified?
  - Low price, benefits, faster, bigger, higher, …

- **Why** are we measuring and who is the Evaluator?
  - Buy product, react on complaints, improve quality, infer features, tune advertising, identify trends, …

■ **Textual Information Source**

- – User: amateur, professional, owner/user/tester

- – Type: proposition, feedback, comment, rating

- – State: raw, reviewed, edited

- – Conventions and Markup: hashtags, emoticons, links

- – <u>Language</u>: English, German

- – <u>Quality</u>: well formed, dialect, full sentences, snippets

- – <u>Length</u>: tweet, article, review

- **Broad Common Knowledge**
  - Cultural aspects, language, defaults
    - Company, Car, Features
    - Samples   good 👍   bad 👎 accident 👎

- **Specific Domain Knowledge**
  - Overrules
    - VW Passat, Price, CO^2
    - Samples   up 👎   down 👍 emission 👎

- **Application Goals and Viewpoint**
  - Quantifies
    - Potential Buyer   price up 👎 CO^2 down 👍
    - Shareholder   price up 👍 CO^2 down 👍

Customization

➜ **Linguistic Resources**

1. Identify Anchors

2. Combine to higher-level Closures

3. Evaluation: assign and merge values
   – structures, concepts, and **concept instances**

■ Example
  – **Concept Instances**
  – Operators: **Negators**, **Intensifiers**, **Modifiers**, and **Statics**

… the PRODUCT does not cause very big problems ..
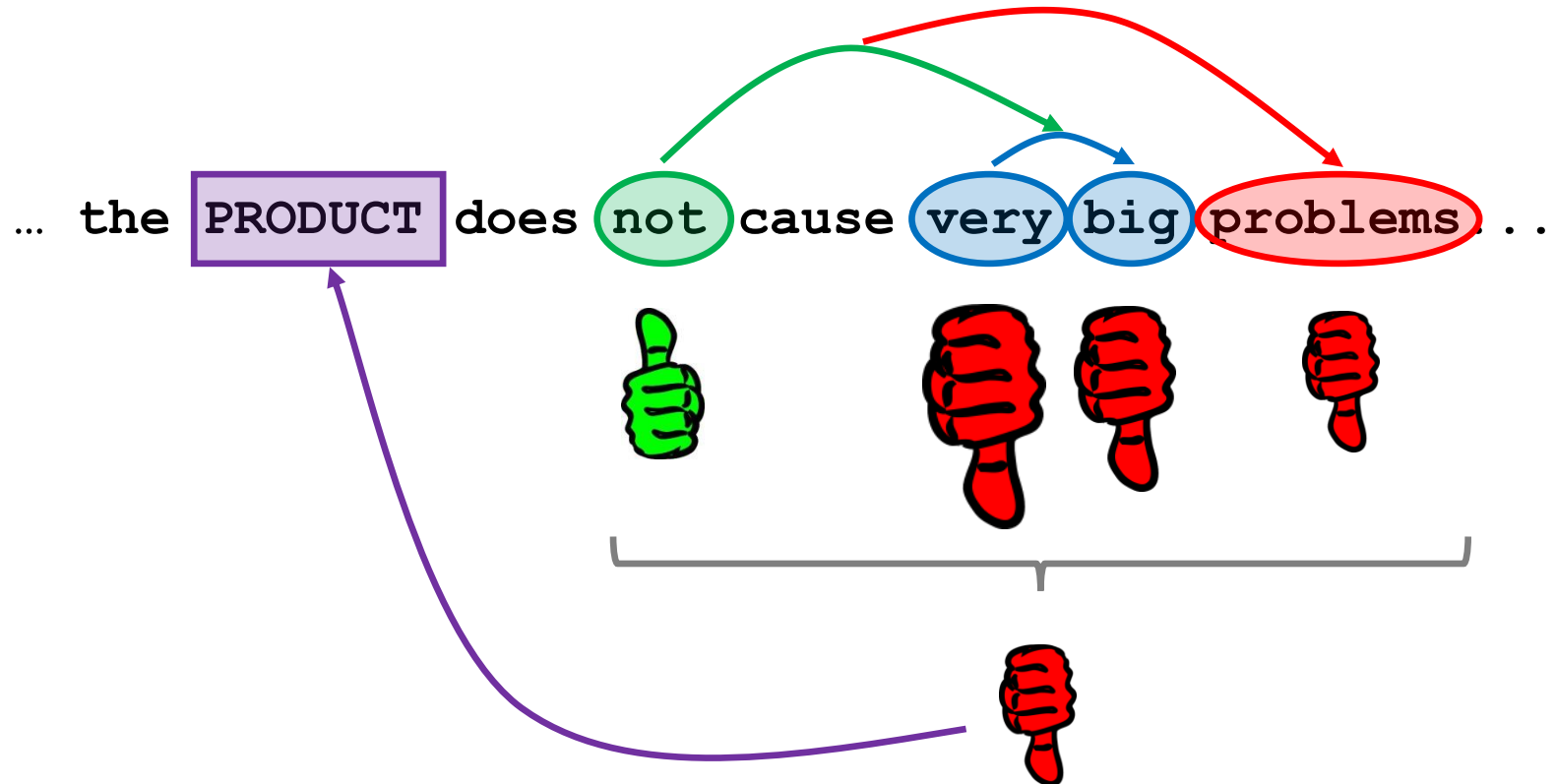
- Large Resource Pools
  - Quality assured by (domain) experts
  - 3rd Party data integration

- Resource Types
  - Dictionaries and Ontologies
    - Language independent merged with language specific
  - Language Models and Statistics
  - Linguistic Knowledge (syntax, semantics, grammar)
  - Hierarchically organized
    - Common > Domain > Viewpoint

➜ **Customized generation of resources**

- **Broad bandwidth of sentiment analysis services**

Input					
These products cause <u>problems</u> for customers.	-0,50	-0,25	-0,34	-1,00	-0,50
These products do <u>not</u> cause <u>problems</u> for customers.	0,50	0,00	0,29	-1,00	0,50
These products do <u>not</u> cause <u>big</u> <u>problems</u> for customers.	1,00	0,00	0,27	-1,00	-0,25
These products do <u>not</u> cause <u>very</u> <u>big</u> <u>problems</u> for customers.	1,00	-0,21	0,26	-1,00	-0,62
These products do <u>not</u> cause <u>any</u> <u>problems</u> for the customers.	0,50	0,00	0,27	1,00	0,50

1   **2**   **3**   **4**   **5**

Technology Comparison (2) – LingRep

- **Free Test Service and Demo**
    - REST API, **http://processing.lingrep.com**

- TWIction – Twitter in Action

  - Real time text analytics
  - Based on public and user streams
  - Tracking of
    - Global: <u>Products</u>, <u>People</u>, <u>Topics (terrorism)</u>
    - Finance: <u>Single Stocks</u>, <u>Opinion Leaders</u>, and <u>Topics (employment rate)</u>
  - Research functionality on historic data
  - Qualitative analytics with drilldown (language, location, hashtag)

➔ **Goal: Reduction of big data to managable amounts**

http://twiction.lingrep.com

- **Customer Satisfaction Measurement**
  - Domain and Viewpoint specific

- **LingRep based on Linguistics**
  - Customizable, fault tolerant, fast
  - Simple to integrate (REST)
  - Proven technology
    - Social Media Analysis
    - Financial Tracking & Trading
    - Risk Assessment

- **Opens up many possibilities**

- Visit **http://lingrep.com**

Thank you!

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