

**sme.  
scoring  
eu**

**Scoring SME  
companies in  
seconds**

smescoring.eu, November, 2019

# The Brief

**We provide an alternative scoring of SMEs in order to lower the default rate and increase the approval rate at the same time**

## **Fully automated**

Lower the cost and error of manual work

## **Instant rating**

Get immediate info

## **Continuous company checking**

Do not rely on one-time verification

## **Gini coefficient improvement**

Get more clients without risk increase or lower the risk of current portfolio

# New Data Structure

## Check covered by a standard bank approval process



### Finance Health

- financial statements
- bank transactions



### Liabilities

- central evidence of executions
- lists of debtors
- donation receivers



### Business Registry

- official public business registry
- other business registry

## Scorecard proposed by smescoring.eu



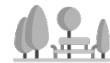
### Company Online Presence

- business registry
- company website
- company fb profile



### Company Online Ratings

- google reviews
- company platform reviews
- sentiment analysis of company fb profile



### Online Environment Around The Company

- ownership structure
- company and representatives reputation matrix
  - peer analytics
- article text analysis

# Alternative scoring: 3 phases

1. Company online presence and ratings
2. Company and representatives reputation matrix
3. Article text analytics

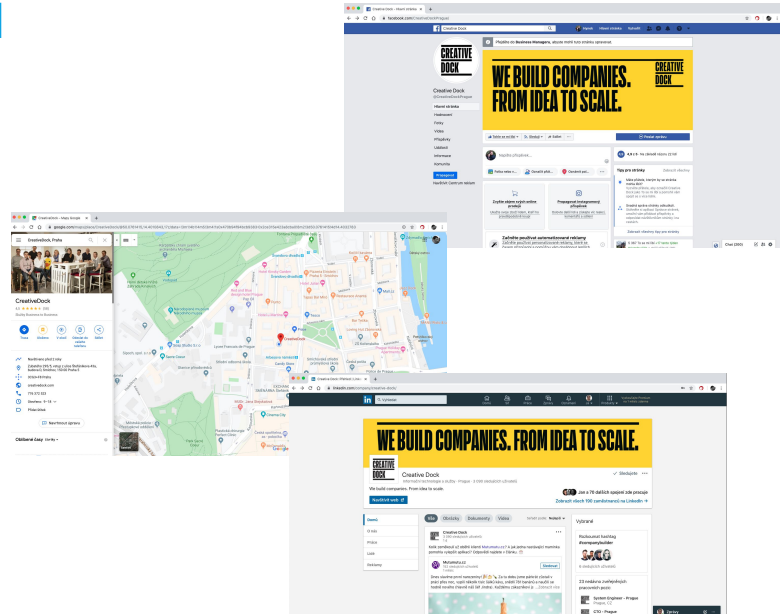
# Phase 1: Company online identification

In order to scrape and analyze company online footprint we first need to identify its online presence.

We search for data sources having direct impact on company payment morale

- Online registry records
- Company website (if there is any)
- Company facebook site
- Company google maps profile

The output is a set of links enriched by a level of confidence.



# Matching Algorithm: Obchodní rejstřík

IČO 28988442

Název subjektu:	<b>CreativeDock s.r.o.</b>	IČO:	<b>289 88 442</b>
Spisová značka:	C 158121 vedená u Městského soudu v Praze	Den zápisu:	25. listopadu 2009
Sídlo:	Zubatého 295/5, Smíchov, 150 00 Praha 5		

# Matching Algorithm

Make sure that there is a NEEDLE in the HAYSTACK

# Matching Algorithm: Example 1

Google

site:facebook.com CreativeDock Praha

VŠE MAPY OBRÁZKY NÁKUPY VIDEA ZPRÁVY KNIHY VYHLEDÁVACÍ NÁSTROJE

Měli jste na mysli: site:facebook.com **Creative Dock** Praha

**Creative Dock - Obchodní služby - Praha - 22 hodnocení - 126 fotek ...**  
<https://cs-cz.facebook.com> > Místa > Praha > Obchodní služby

Hodnocení 4.9 ★★★★★ (22)

Creative Dock – Zubatého 5, entry from Stefanikova 43a, 15000 Praha – Hodnocení 4.9 založeno na 22 hodnocení „It's was a great event! Thank you Creative...

**Creative Dock - Business Service - Prague, Czech ... - Facebook**  
<https://www.facebook.com> > ... > Prague, Czech Republic > Business Service

Hodnocení 4.9 ★★★★★ (22)

Creative Dock – Zubatého 5, entry from Stefanikova 43a, 15000 Prague, Czech Republic - Rated 4.9 based on 22 Reviews "It's was a great event! Thank you...

**Creative Dock - Unternehmensdienste - Prag - 22 Bewertungen ...**  
<https://de-de.facebook.com> > Orte > Prag > Unternehmensdienste

Hodnocení 4.9 ★★★★★ (22)

Creative Dock – Zubatého 5, entry from Stefanikova 43a, 15000 Prag – Mit 4.9 ... and his many adventures, the last of which so far is Refinanso.cz, on our blog .

**Creative Dock - Obchodní služby - Praha - 22 hodnocení - 125 fotek ...**  
<https://cs-cz.facebook.com> > ... > Praha > Obchodní služby > Creative Dock

Creative Dock – Zubatého 5, entry from Stefanikova 43a, 15000 Praha – Hodnocení 4.9 založeno na 22 hodnocení „It's was a great event! Thank you Creative...



# Matching Algorithm: Example 2

## Search: Mutumutu Facebook

[https://www.facebook.com/CreativeDockPrague/posts/1216920855136170?\\_fb\\_noscript=1](https://www.facebook.com/CreativeDockPrague/posts/1216920855136170?_fb_noscript=1)

[https://www.facebook.com/CreativeDockPrague/posts/1231864486975140/?\\_fb\\_noscript=1](https://www.facebook.com/CreativeDockPrague/posts/1231864486975140/?_fb_noscript=1)

<https://www.facebook.com/MutumutuCz/>

<https://www.facebook.com/czechcrunch/posts/1606941696078991/>

<https://tyinternety.cz/startupy/mutumutu-kryje-zakazniky-na-vic-nez-miliardu-ted-se-mu-maji-otevrit-dvere-do-evropy/>

<https://www.mutumutu.cz/>

# Matching Algorithm: Example 2

## Search: Mutumutu Facebook

[https://www.facebook.com/CreativeDockPrague/posts/1216920855136170?\\_fb\\_noscript=1](https://www.facebook.com/CreativeDockPrague/posts/1216920855136170?_fb_noscript=1)

[https://www.facebook.com/CreativeDockPrague/posts/1231864486975140/?\\_fb\\_noscript=1](https://www.facebook.com/CreativeDockPrague/posts/1231864486975140/?_fb_noscript=1)

<https://www.facebook.com/MutumutuCz/>

<https://www.facebook.com/czechcrunch/posts/1606941696078991/>

<https://tyinternety.cz/startupy/mutumutu-kryje-zakazniky-na-vic-nez-miliardu-ted-se-mu-maji-otevrit-dvere-do-evropy/>

<https://www.mutumutu.cz/>

# Matching Algorithm: Results

## Registry: IČO 28988442

Název subjektu:	<b>CreativeDock s.r.o.</b>	IČO:	<b>289 88 442</b>
Spisová značka:	C 158121 vedená u Městského soudu v Praze	Den zápisu:	25. listopadu 2009
Sídlo:	Zubatého 295/5, Smíchov, 150 00 Praha 5		

## Representation of the company on the Internet:

Facebook: <https://www.facebook.com/CreativeDockPrague>

Website: <https://www.creativedock.com>

Firmy.cz profile: <https://www.firmy.cz/detail/12897394-creativedock-praha-smichov.html>

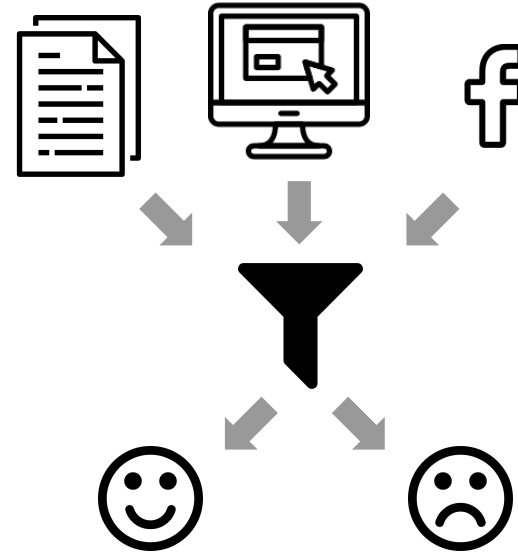
Google maps profile: <https://www.google.com/maps/place/CreativeDock/@50.0761449,14.4010896,17z/data=!3m1!4b1!4m5!3m4!1s0x470b94f94bcb9383:0x2ce315e423a8cba0!8m2!3d50.0761415!4d14.4032783>

# Phase 1: Company online data scraping and evaluation

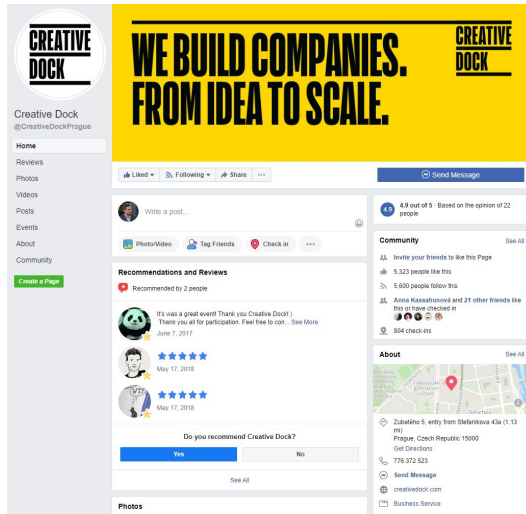
Based on company online identification we scrape data from found sources and prepare online score to enrich an existing scorecard.

We scrape the data from company website, fb profile and other sources to get unstructured information about company current and past online presence.

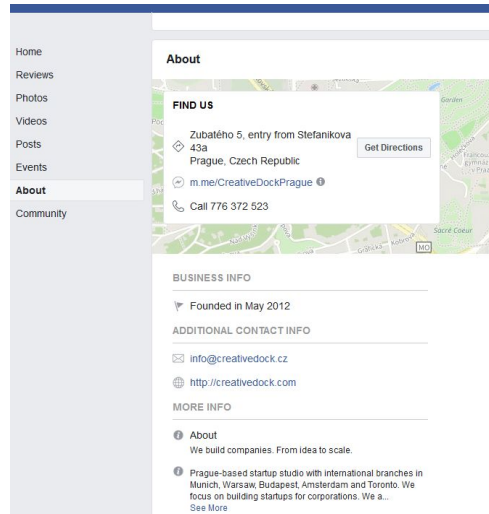
This is then used to create hundreds of variables as an input for a scoring model.



# Algorithm: Scraping data



Home page



About page



Post

# Algorithm: Statistical features

## The post can be transformed into a set of statistical features:

- published on June 7, 2019
- has 35 reactions
- 3 reactions of type LOVE
- 32 reactions of type LIKE
- Contains 52 words
- Contains 1 image
- Contains 3 links
- ...



Creative Dock

June 7 at 4:30 PM · 🌐



Kostky jsou vrženy, ceny rozdány a my spolu s týmem Mutumutu můžeme slavit. Naše online životní pojištění se v soutěži Nápad roku ze 174 přihlášených projektů umístilo na 7. místě, máme proto velkou radost. Gratulujeme vítězům i zúčastněným a přejeme jim mnoho dalších úspěchů! Kdo dosáhl na stupínky vítězů, se podívejte tady: [bit.ly/NapadRoku2019](https://bit.ly/NapadRoku2019)

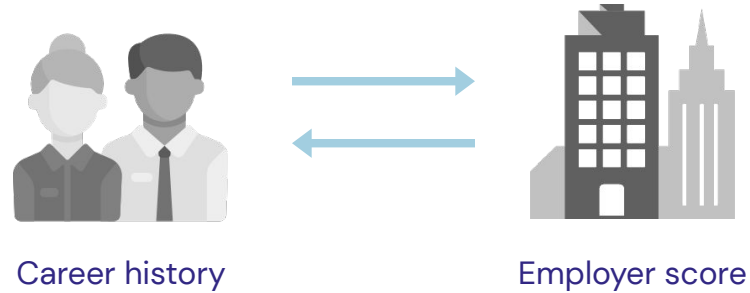


  35

## Phase 2: Company and representatives reputation matrix

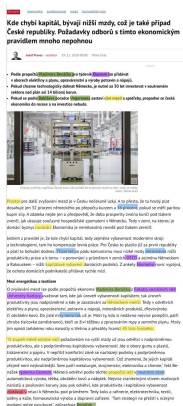
We analyze company representatives history and build their reputation based on prior company leading results.

By company representatives we mean – management, owners, advisory board.



# Phase 3: Article text analysis

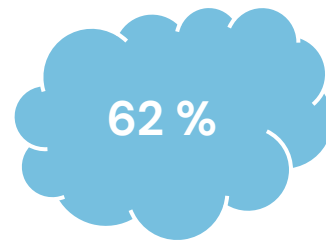
We find articles mentioning targeted company.  
Text analysis give us the sentiment of the article  
for the company evaluation.



Article mentioning scored company



Assigned keywords



Company sentiment rating



# Team & contact

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Project lead



**Pavel Charamza**  
Risk Expert



**Miroslav Esser**  
Risk Expert



**Hynek Jina**  
Project manager



**Katarina Bakosova**  
Data Scientist



**Adam Hanka**  
Data Scientist



**Jan Slovacek**  
DevOps Specialist



**Matej Pacovsky**  
Data Engineer



**Jan Machek**  
Data Engineer

Small Business  
Scoring  
EU

Thank you