

Tobacco Watcher:

Real-time Global Tobacco Surveillance Using Online News Media

Joanna Cohen, PhD¹, Rebecca Shillenn, BA¹, Mark Dredze, PhD², John W. Ayers, PhD³

1. Institute for Global Tobacco Control, Johns Hopkins Bloomberg School of Public Health; 2. Human Language Technology Center of Excellence, Johns Hopkins University; 3. Health Watcher Inc. & Graduate School of Public Health, San Diego State University

Rationale

- Monitoring news media can help tobacco control professionals plan strategic advocacy efforts responsive to the changing tobacco environment
- We developed Tobacco Watcher, a real-time surveillance system that monitors tobacco-focused media stories across the globe in many languages
- To demonstrate the potential value of Tobacco Watcher we completed a search of e-cigarette stories by region

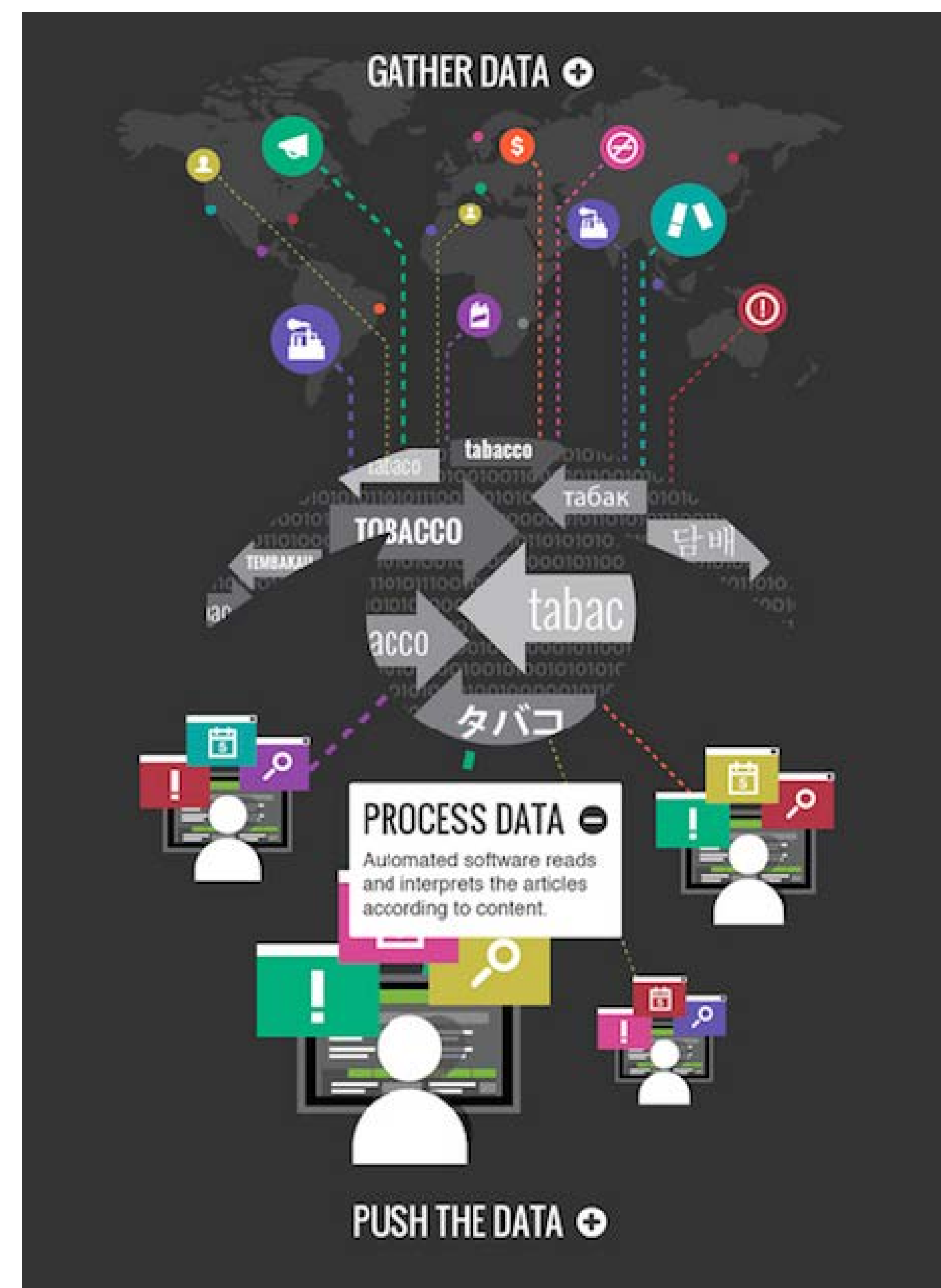
Approach

Continuously search tens of thousands of websites for news articles

Use natural language processing, trained on human-coded data, to assess if articles are tobacco relevant

Automatically code articles by MPOWER-ED, determine location, translate to English

Display processed articles on Tobacco Watcher; searchable by location, MPOWER-ED, date, language and keywords



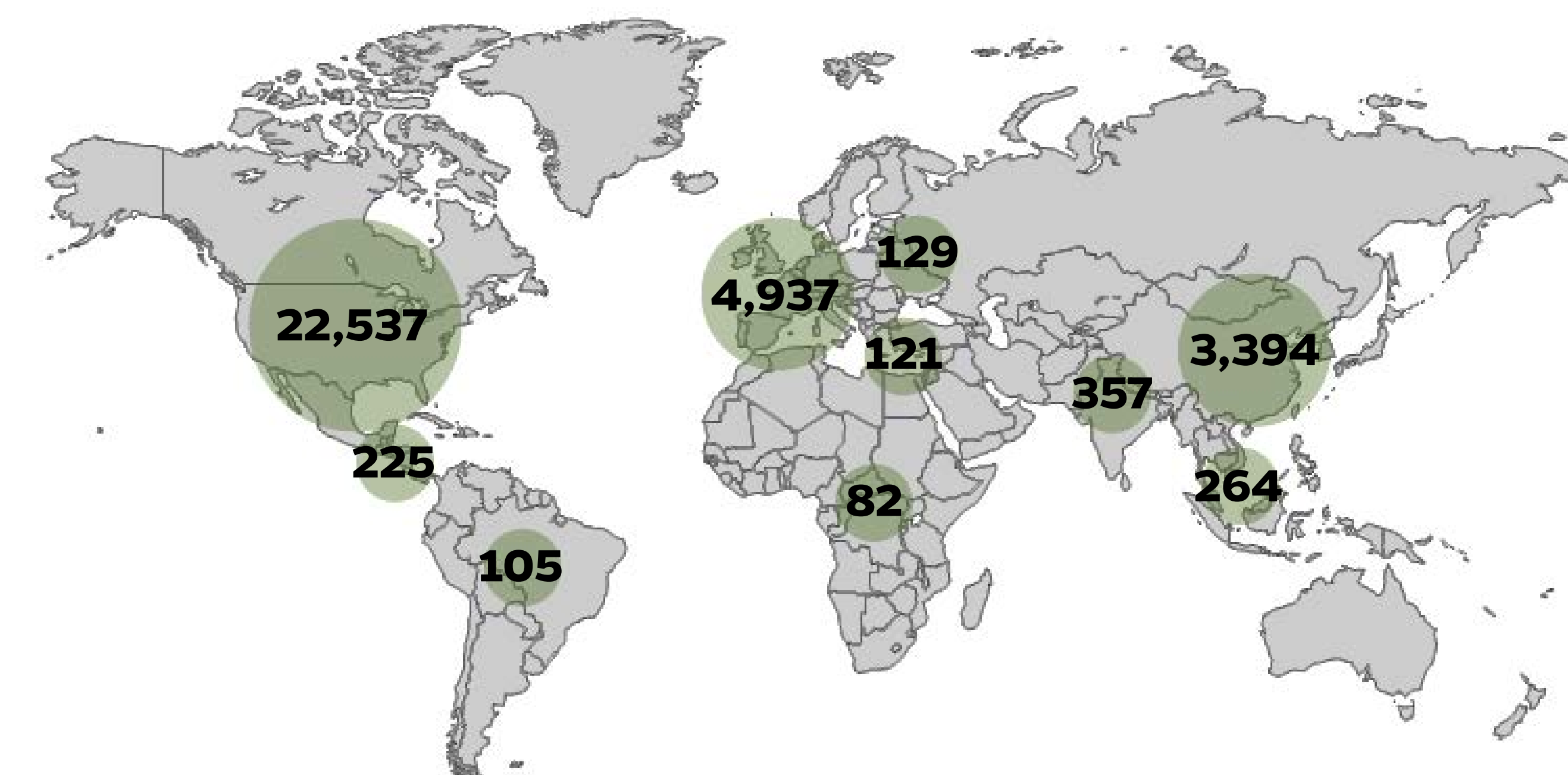
Results



106,523
Tobacco-specific
articles processed

82
countries

E-cigarette stories by region (Dec. 2012 - Dec. 2014)



News stories by MPOWER-ED theme (Dec. 2012 - Dec. 2014)



Next Steps

Discussions with key target audiences will inform next stage of website's development, including expansion of news sources and language, personalized email alerts and a tool for user-initiated analysis of news stories by region, keyword, language or MPOWER-ED.

Acknowledgements: This work was supported by a grant from the Bloomberg Initiative to Reduce Tobacco Use to the Johns Hopkins Bloomberg School of Public Health; **Conflicts of interest:** None