



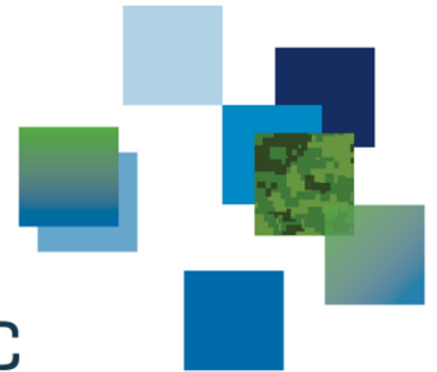
# Providing Focus via a Social Media Exploitation Strategy

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19th ICCRTS  
June 2014

Canada 

DRDC | RDDC



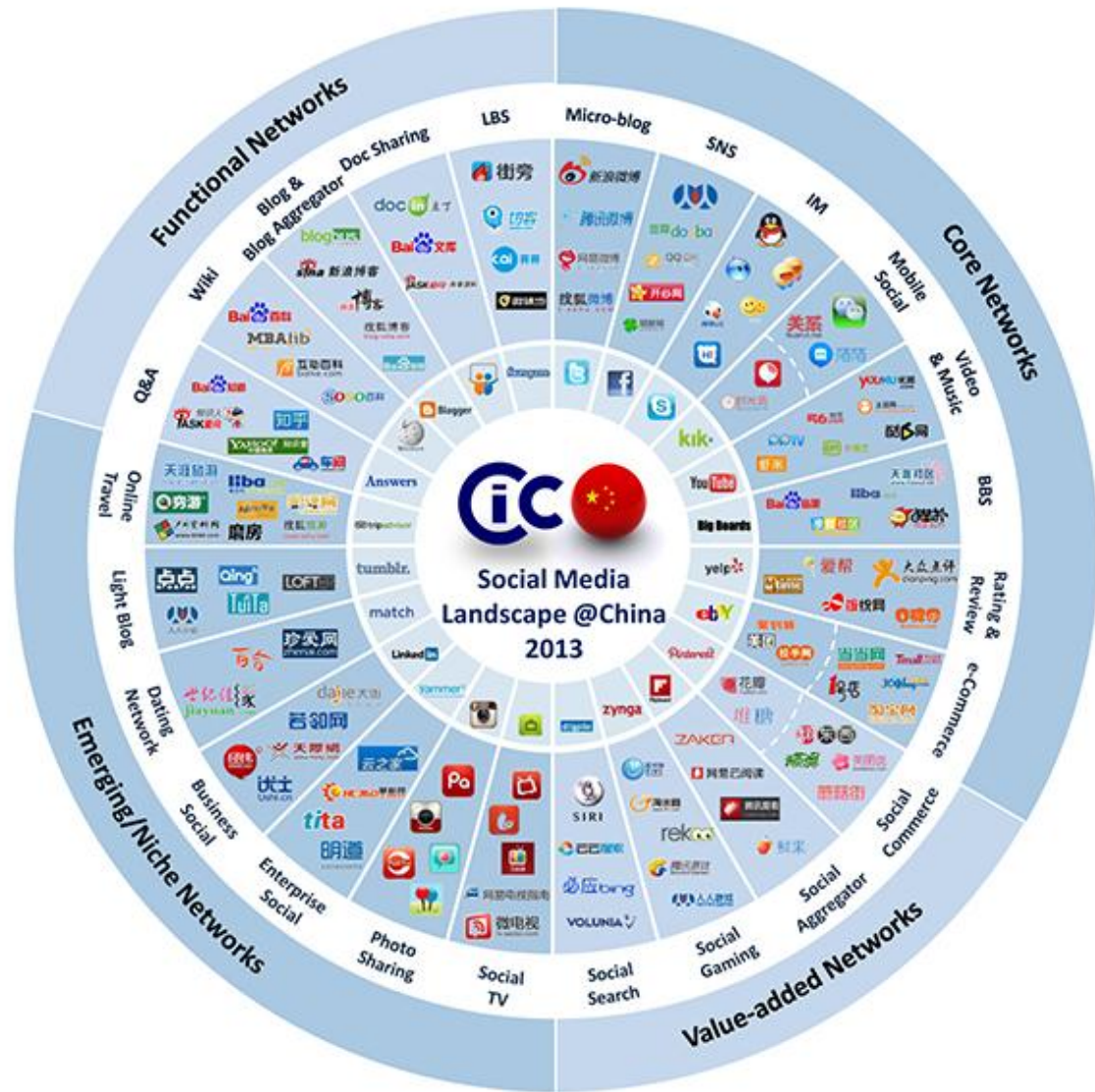


**“Huh. So Iran just friended us on Facebook ... Like, do I accept?”**

# What to monitor?



# China's SM sites



- Unique platforms
- Many COTS tools and companies
- Lack of understanding
- Little training
- Few resources



**Feeling Overwhelmed**

# Significant challenges (based on analyst interviews)

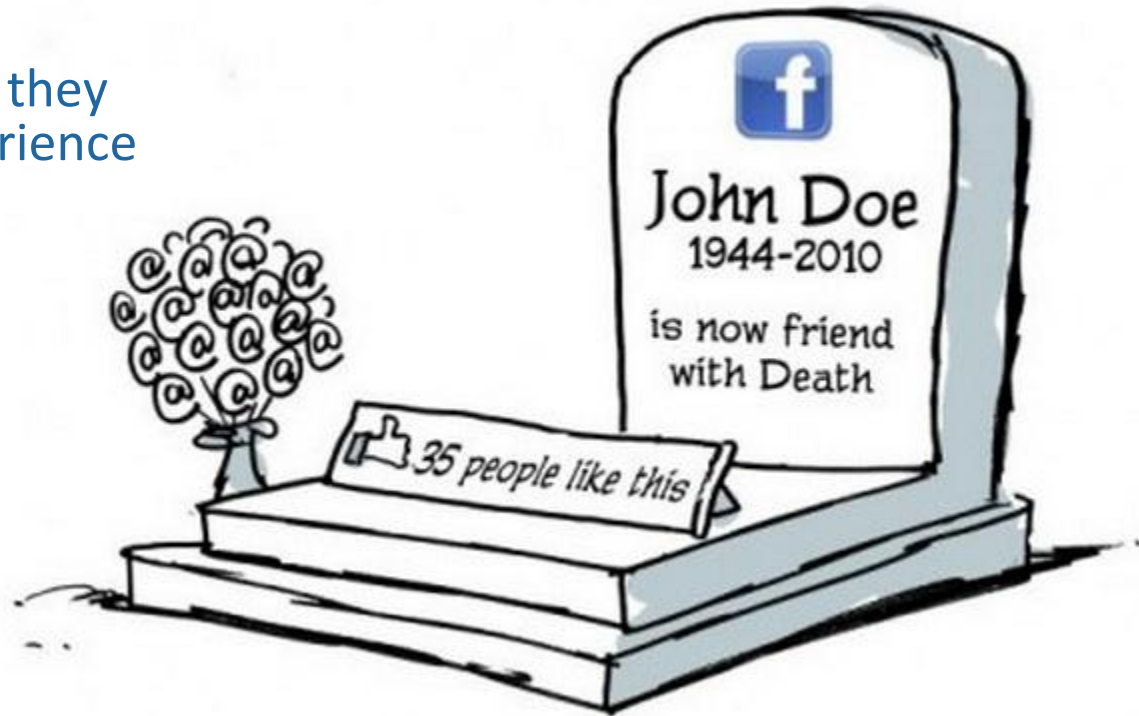
- IM & IT policy, & security issues
- Anonymous access close to their workspaces
- IC attitudes
- Tools, methodologies, and training



Sorry, but it's gotta go. Management says it could be used to access Facebook.

## Early 2014 – A brief moment of clarity

- Everyone wanted to get something started but not sure how to proceed
- Analysts “kind of knew what they wanted” but have little experience
- Knew we could not do it all!
- So we had to jump in
- Feel better through action

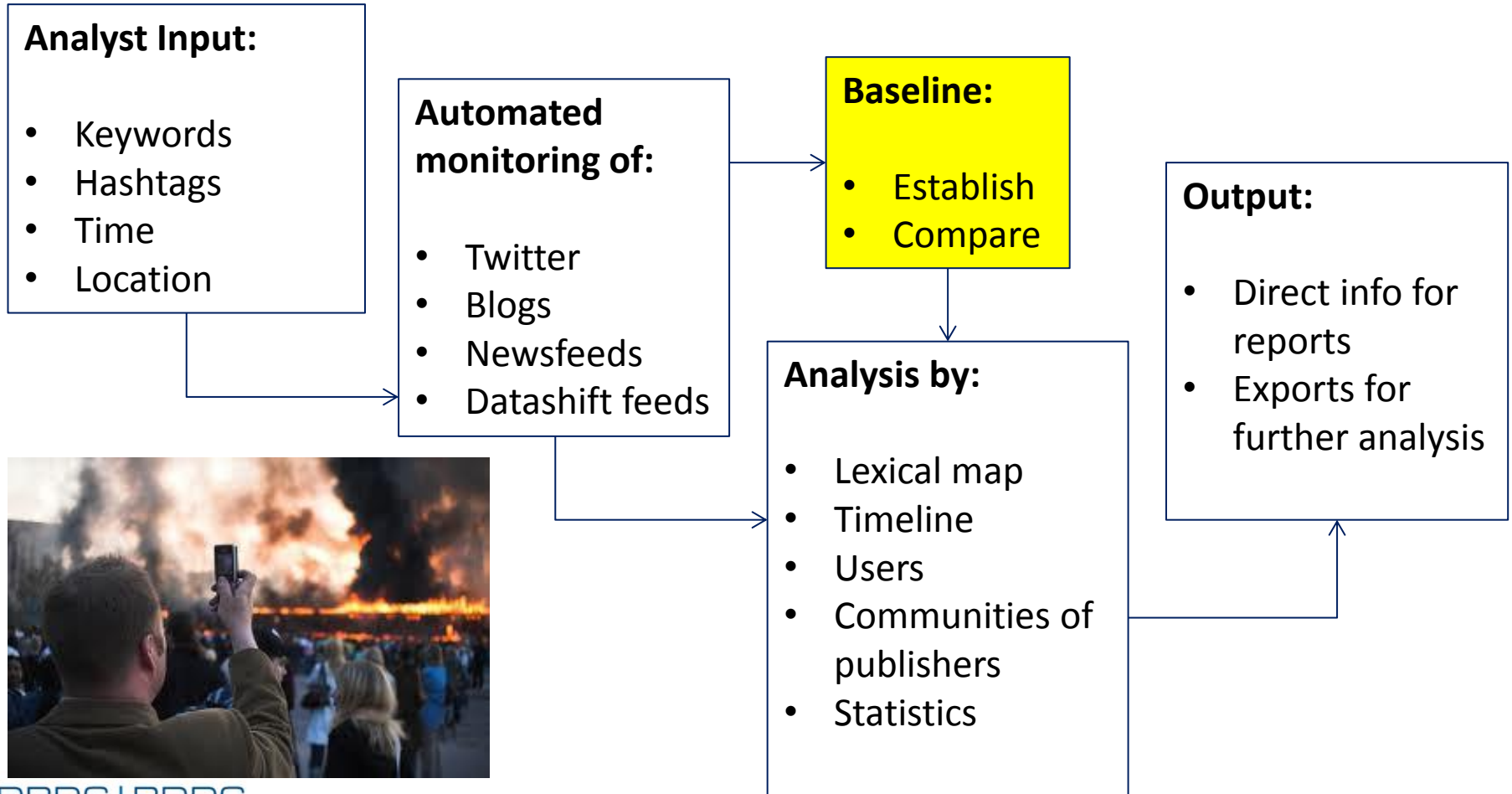


# Three-Pronged Approach to SM Exploitation

- i. Day to day monitoring
  - Automated as much as possible
  - Good ability to filter – get to the data that matter
  - Ability to export data
  
- ii. Country SM Profiles
  - Ability to quickly decide relevance of SM
  - Keeps track of important by more stable indicators
  
- iii. Deep dive analysis capability
  - Toolbox of important analysis types



# I. Monitoring for Situational Awareness



# Media richness vs Self-disclosure of select social media

	Media richness		
Self-disclosure	Low	Moderate	High
Low	Forums, Wikis	Video and image sharing communities	Virtual games
High	Blogs, Microblogs	Social Networks	Virtual worlds

Intelligence usage	Social media source
<ul style="list-style-type: none"> <li>• <b>Near-Real time Situational Awareness</b></li> <li>• <b>Trend watch</b></li> <li>• <b>Early warning and indicators</b></li> <li>• <b>Alerting service</b></li> <li>• <b>Threat assessment</b></li> </ul>	<p><b>Micro-blog (e.g. Twitter)</b></p> <p>News feeds</p>
<ul style="list-style-type: none"> <li>• <b>Targeting (non-kinetic) (i.e. profiling); identifying and getting information about particular person of interest, groups, organizations.</b></li> <li>• <b>Social Network Analysis</b></li> </ul>	<p>Social networks</p> <p>Genealogy</p> <p>Location</p> <p>Event posting</p>
<ul style="list-style-type: none"> <li>• <b>In-depth content about a subject or content Profile</b></li> <li>• <b>Structure of orgs</b></li> <li>• <b>Understanding the ideology</b></li> </ul>	<p><b>Blogs</b></p> <p>Collaborative projects (e.g. Wikipedia)</p> <p>Forums</p> <p>Content communities (e.g. comments on YouTube)</p> <p>Document and Presentation sharing sites</p>
<ul style="list-style-type: none"> <li>• <b>Collateral damage assessment</b></li> <li>• <b>Targeting</b></li> <li>• <b>Standing products</b></li> <li>• <b>Basic intelligence (baseline)</b></li> <li>• <b>Country reports</b></li> </ul>	<p>Images (e.g. Instagram, Militaryphotos.net)</p> <p>Video (e.g. YouTube)</p>
<ul style="list-style-type: none"> <li>• <b>Social Network Analysis</b></li> <li>• <b>Structure of orgs</b></li> <li>• <b>Understanding the ideology</b></li> </ul>	<p>Virtual game-worlds (e.g. World of Warcraft)</p> <p>Virtual social worlds (e.g. Second Life)</p>

# What still needs to be added to monitoring?



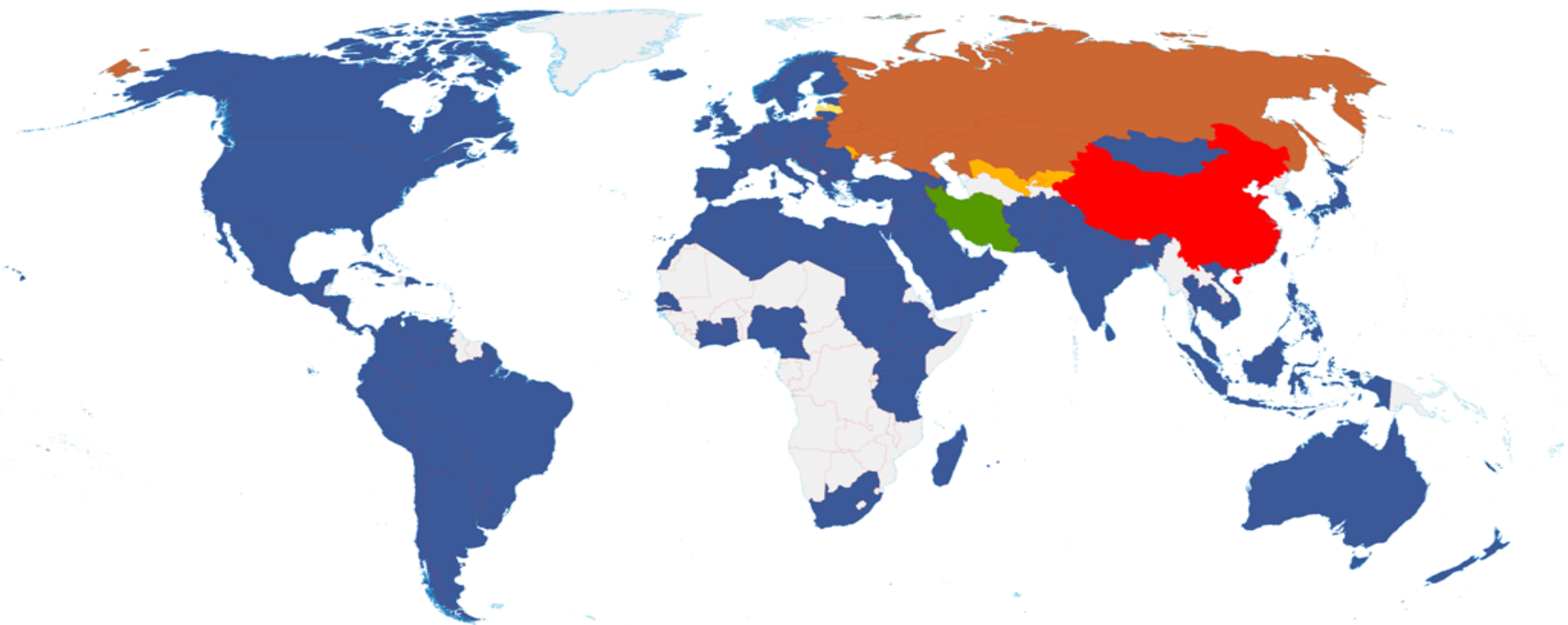
- Auto-alerting
- Automated baseline and trend analysis leading to an alert
- Language capability
- Deep-dive analysis follow-on

## II. Social Media Country Profiles

- Metadata about social media usage is likely to change at a much slower rate than the actual content produced on the platforms
- Maintain profile for a country of interest that allow for fast ramp up
- Gives ability to determine if SM will be a viable source (right population, right focus for INT collection)
- Also provides focus for platform research and training needs

# WORLD MAP OF SOCIAL NETWORKS

December 2013



Facebook QZone V Kontakte Odnoklassniki Cloob Draugiem

FEB  
2014

# GLOBAL DATA SNAPSHOT

FEB 2014 UPDATE

7,095,476,818

TOTAL POPULATION



52%

URBAN

48%

RURAL

2,640,432,161

INTERNET USERS



37%

INTERNET PENETRATION

1,858,450,660

ACTIVE SOCIAL NETWORK USERS



26%

SOCIAL NETWORKING PENETRATION

3,424,960,000

ACTIVE MOBILE USERS



48%

MOBILE USAGE PENETRATION

6,966,523,000

ACTIVE MOBILE SUBSCRIPTIONS



98%

MOBILE SUBSCRIPTION PENETRATION

# Social Networking in the Arab World

Results based on responses from social network users



FACEBOOK  
94%



TWITTER  
52%



GOOGLE+  
46%



INSTAGRAM  
14%



LINKEDIN  
6%

COUNTRIES SURVEYED: QATAR, LEBANON, EGYPT, JORDAN, TUNISIA, KSA, UAE, BAHRAIN

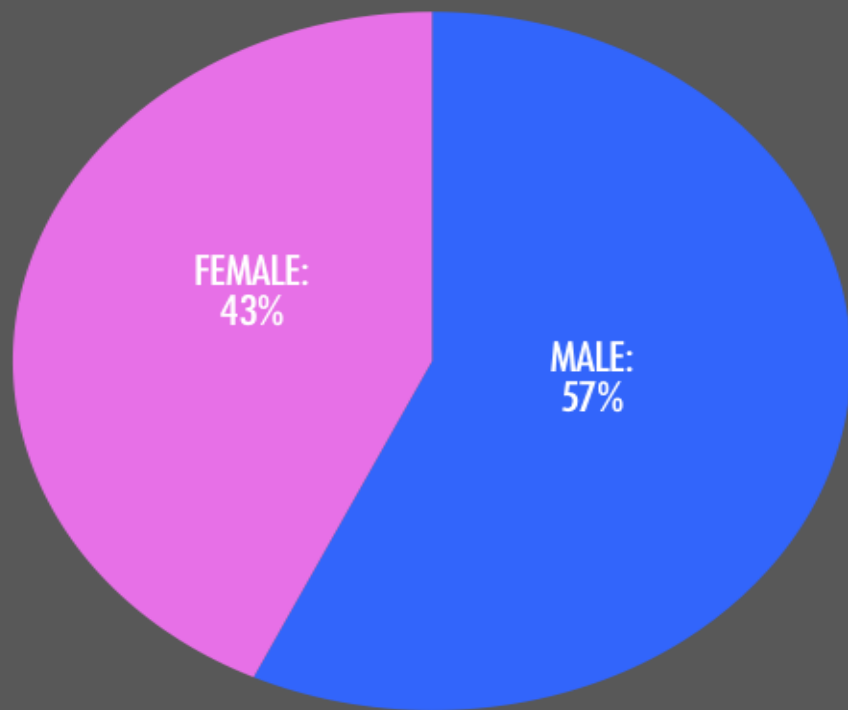
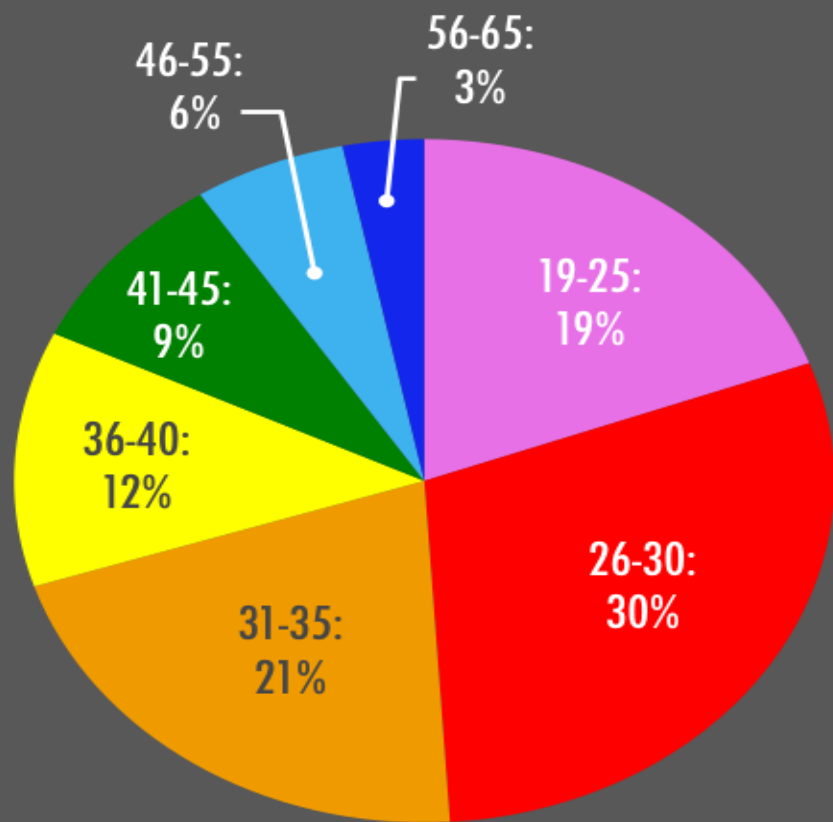
NORTHWESTERN UNIVERSITY IN QATAR, 2013

To explore the findings in detail go to <http://menamediasurvey.northwestern.edu>



OCT  
2012

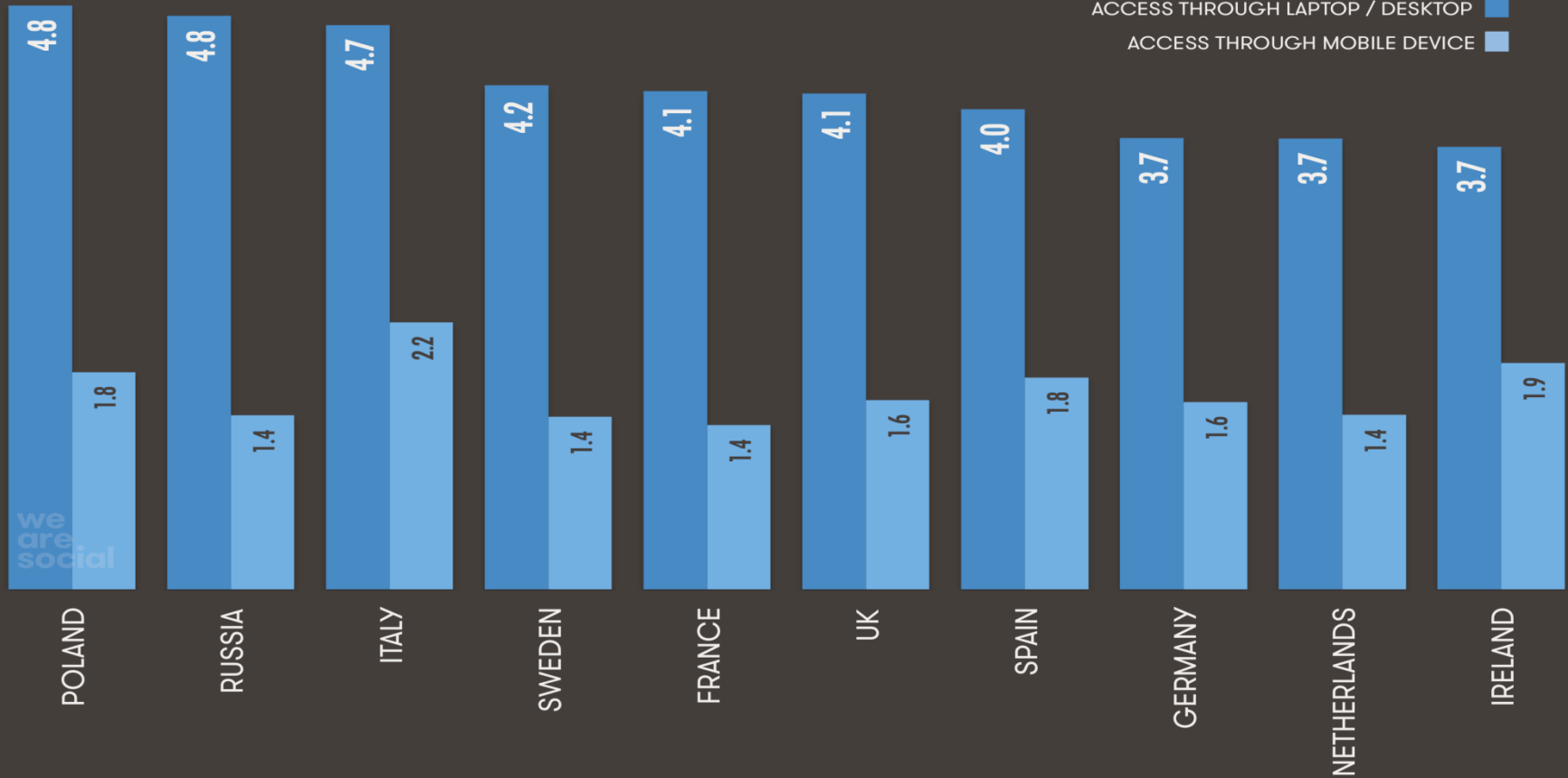
# THE DEMOGRAPHICS OF WEIBO USERS



FEB  
2014

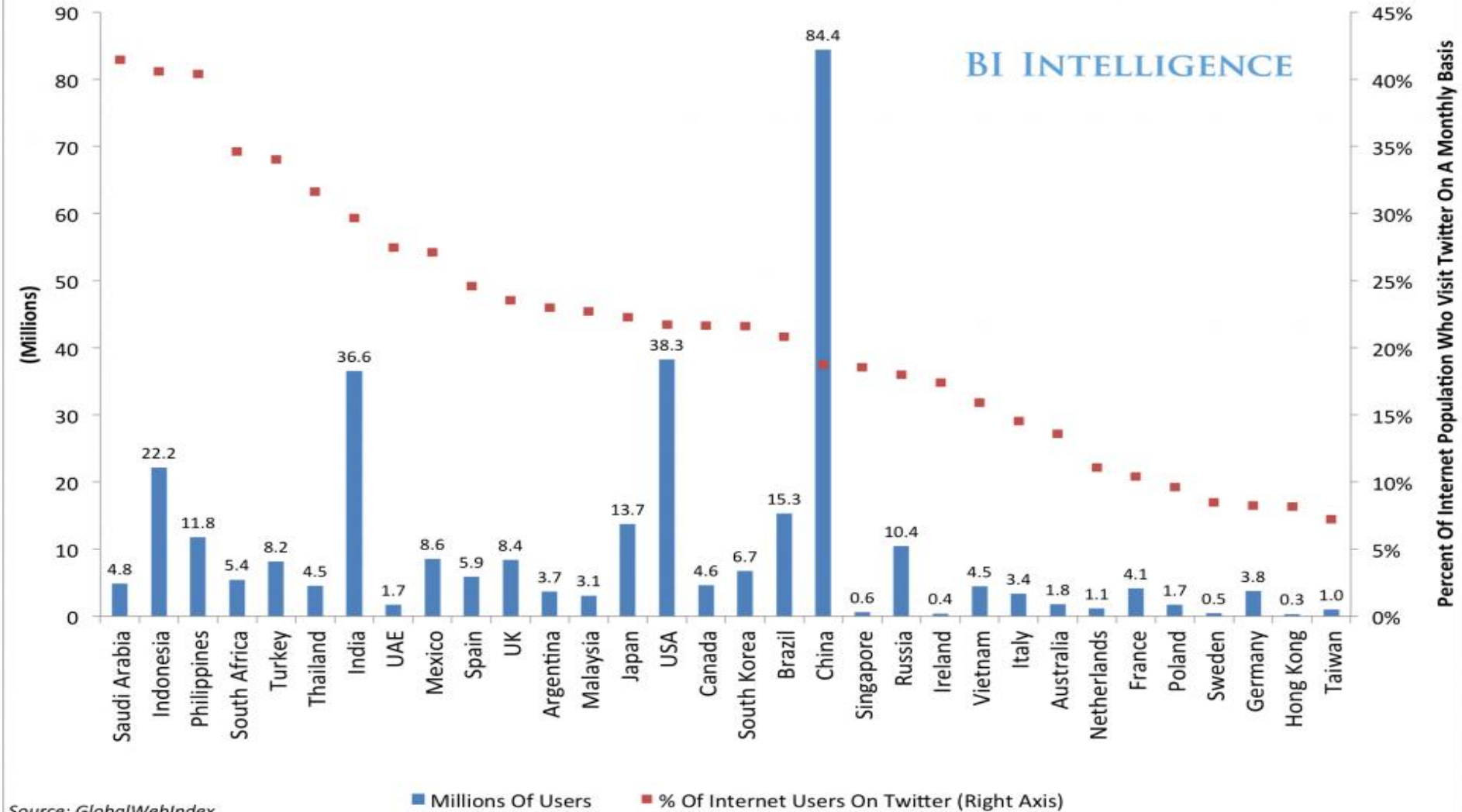
# TIME SPENT ON THE INTERNET

AVERAGE NUMBER OF HOURS PER DAY SPENT BY INTERNET USERS ON THE INTERNET



# Countries Ranked In Order Of The % Of Twitter Users In Their Internet Populations

BI INTELLIGENCE



# Country SM Profile - Template characteristics - 1

- What are the main social media platforms being used?
  - Types most frequently used (blogs, video, image etc.)
  - Who are using each?
    - Age
    - Sex
    - Religion
  - Method of access – PC, Mobile
- What are the main topics of interest discussed
  - Blogs
  - Mico-blogs
  - Videos



# Country SM Profile - Template characteristics -2

- Cyber concerns
  - What types of deception originate from this country?
  - Use of bots
  - Criminal activities
- Who has control of these platforms?
  - What is the level of government monitoring of these platforms?
  - What types of actions are taken against SM users?
- Geolocation data
  - What other countries are sharing these platforms?
  - What are the main other countries that contribute for the popular discussion for the country of interest?



### III. Deep Dive Analysis

- Constantly changing platforms and features
- Different platforms used around the world
- Hundreds of media formats
- Many COTS tools, methods and services
- High level of language and cultural understanding
- High level of trg. for analysts



# Interview results sample – Analysts think that SM is good for:

- Monitoring of remote location events (for validation purposes) - YouTube has proven to be very useful and used to complete INT reports about damages and armaments used.
- Follow tweets from influencers.
- **Perceive sentiment about an evolving conflict situation (predict what's next)**
- **Perceive reaction and local population attitudes about some decisions on foreign policies.**
- Quickly analyse the effect of operations on local population (assess kinetic effect, measure success, understand social reaction to operation, define influence requirements).
- Corroborate quickly some information from other INTs (need many sources).
- **Identify the real intent of individuals and groups (identify contradictory discourses) - variations of intent.**
- **Identify patterns of life of individuals.**
- **Identify, understand, and monitor social networks.**
- **Dig information triggered by SIGINT activity.**
- **Perceive the extent of misinformation about a situation.**
- **Perceive the difference between what media is advertising and what people are thinking (on what side do they stand).**
- Stay up-to-date about how people exchange information.
- **Monitor influence - Identify both strong leaders and soft leaders in the SM world.**
- **Force protection (monitor exposure of critical military assets and operations to outside world).**
- **Rumor detection.**
- Monitoring “friendly” SM for Counter Intelligence, OPSEC and the adversary’s perception of us.

# Types of Analysis

- **Trend analysis and Prediction**
- **Geo-location**
- **Opinion and Sentiment**
- **Social Network Analysis**
- **Temporal**
- **Finding influencers**
- **Patterns of life**
- **Semantic analysis**
- **Anomaly detection**

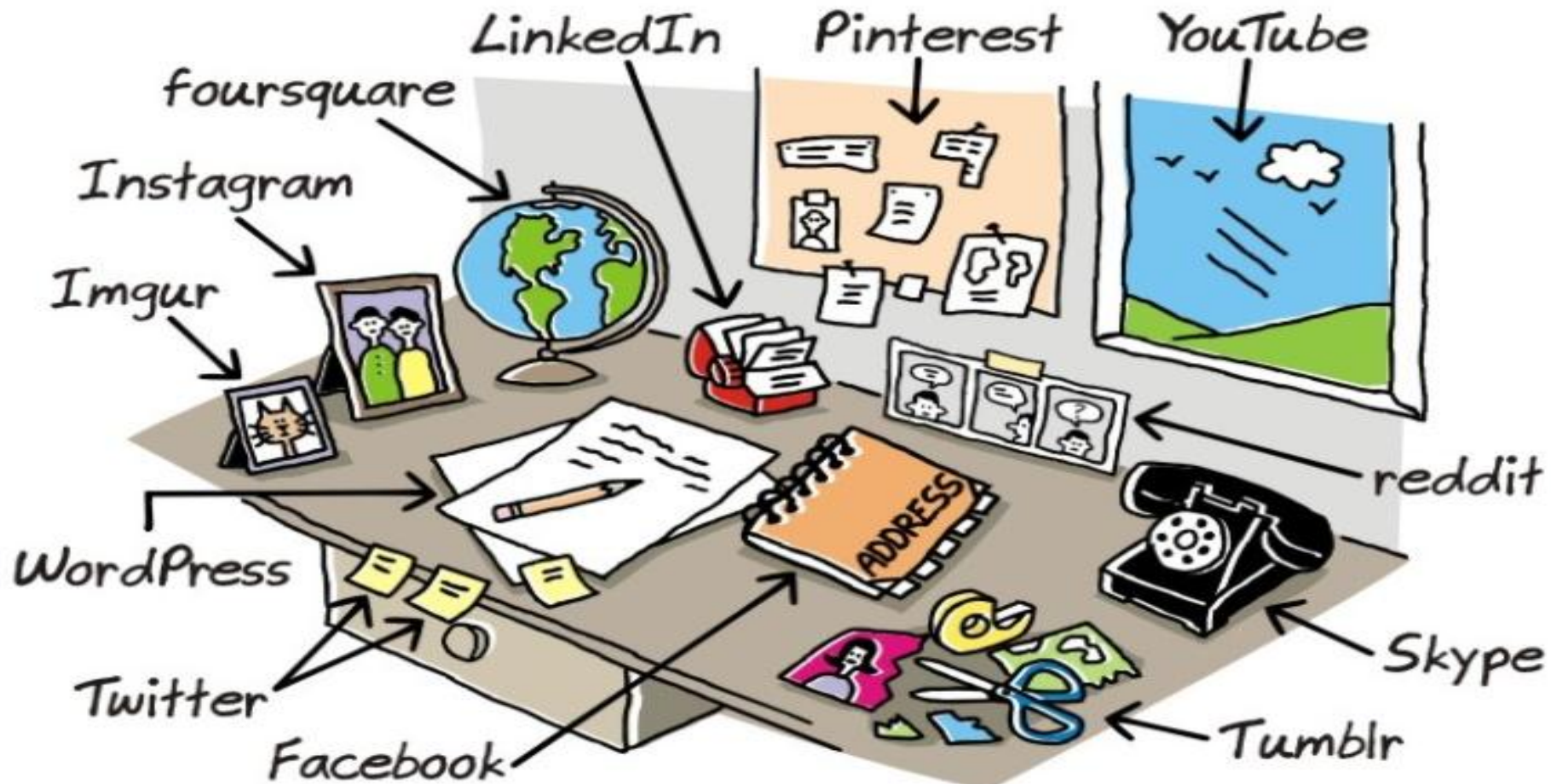
- Discovery
  - Visual analytics
  - Data mining
  - Network and link analytics
    - For example: Community detection, information flow
- Data reduction
  - Fusion
  - Filtering
- Relevance assessment
- Credibility and reliability assessment
- Classification and clustering
  - Cultural analysis
  - Theme detection
  - Rumour detection
  - Dialect detection
  - Pattern detection
- Statistical analysis
  - Techniques particular to large data collections
  - What stats are being produced?
- Narrative structure analysis
- Intent analysis



## How we will Proceed:

- Let our analysts gain some experience with the SM data
- Conduct research into the likely deep-analytic types
- Look for COTS, or develop, deep dive analysis tools and techniques
- Prioritize based on countries of interest for SMCP and Platforms
- Incorporate different language capabilities
- Add cultural meaning analysis

# vintage social networking



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