



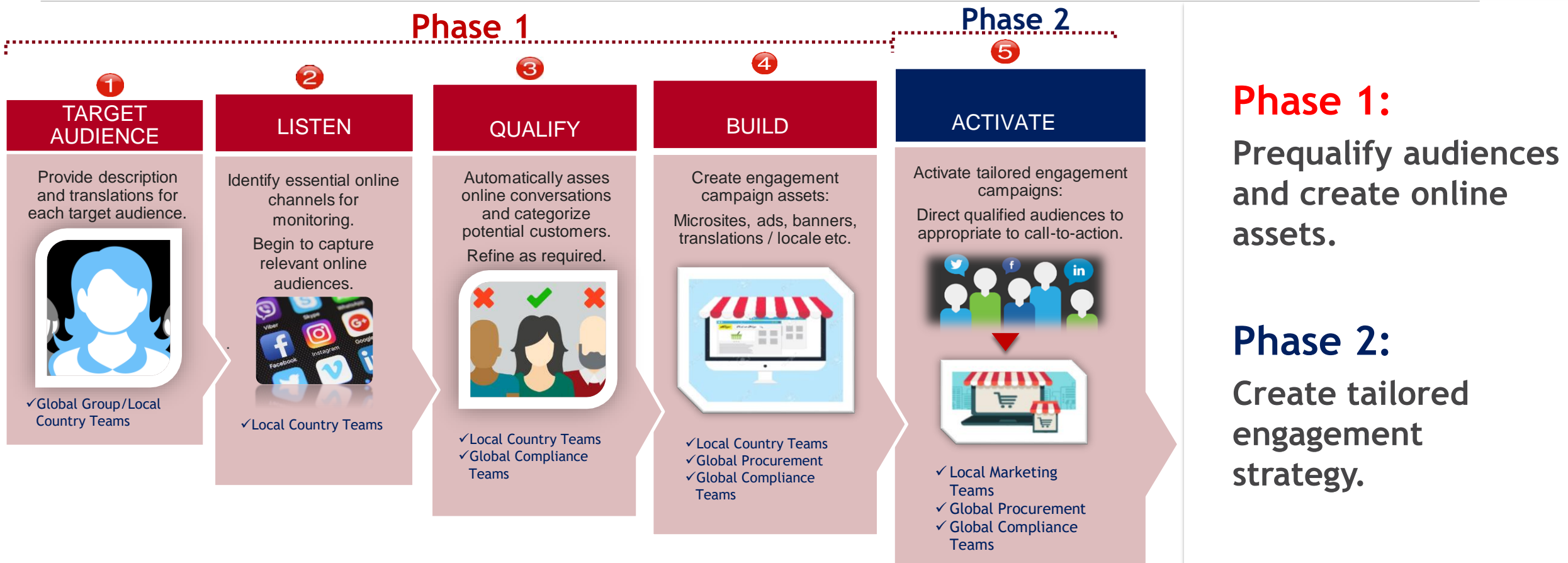
iSWARM: Summary of Services

April, 2019

1. Product Overview
2. Consumer Engagement
3. Services Review
4. Case Studies & Use Cases
5. Compliments EPAM's Digital Strategy

1. Product Overview

iSwarm delivers EPAM clients a *two phase* approach for effective and efficient online engagement.



2. Consumer Engagement

iSwarm identifies online audiences across the **adoption stages** to create hyper-targeted consumer engagement.

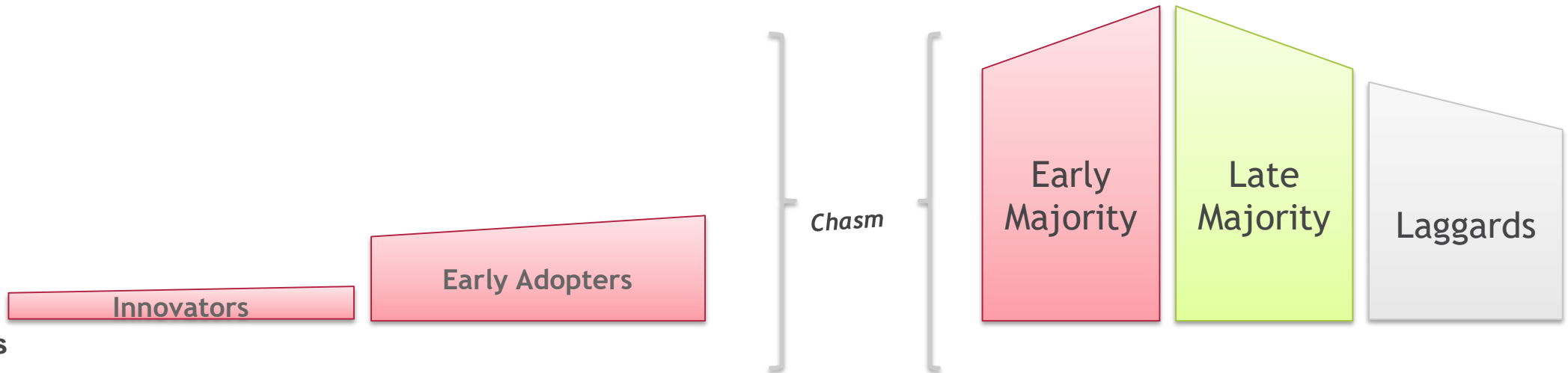
Early Market

iSwarm pre-qualifies and engages with influencers, key opinion leaders, innovators and niche communities.

Mainstream

iSwarm targets conservative and economical markets to help clients cross and succeed beyond the adoption lifecycle chasm.

Typical
Consumer
Adoption Stages



3. Services Review – Setup



Target Audience

Create target audience(s) based on engagement goals.

Highlights:

- Inclusion and exclusion criteria to track relevant topics, keywords and phrases.

Source Access:

- Newsfeeds, Blogs, Forums, Multimedia.
- Social Network APIs.
- Twitter Firehose API.
- Speech to Text Conversions.



Listen

iSwarm's listening algorithm analyzes and classifies massive amounts of real-time data to begin categorizing potential consumers.

Highlights:

- Natural language processing.
- Human coded sentiment analysis.
- Quality score weightings.

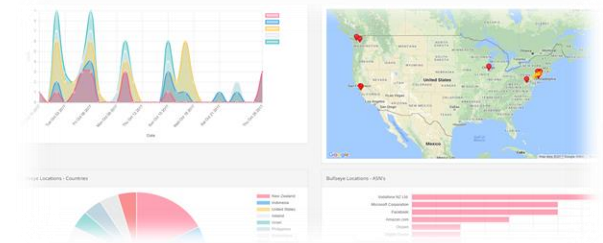


Qualify

Qualify relevant consumers that are willing to learn about new products through online channels and social networks.

Highlights

- Review consumer breakdown.
- Demographics drill-down.



3. Services Review – Activation



Build

Create campaign assets and collateral for customer engagement.

Highlights:

- Microsites, forms, ads, banners, etc.
- Create new or integrate into existing collateral.
- Ability to adhere to regulatory or compliance requirements i.e. GDPR or HIPPA.



Activate

Select campaign engagement approach. Direct qualified audiences to appropriate call-to-action.

Tailored Engagement:

Hyper-targeted approach utilizing user targeting capabilities i.e.:

- Twitter tailored audiences (user lists, web, mobile, partner programs available)
- Facebook custom audiences (user lists, additional resource programs available)
- Reddit sub reddit targeting (User specific topics, user specific search relevance)

Wide Engagement:

Utilize captured data metrics to create a wider engagement approach to more broadly target:

- Pre-qualified communities, user groups
- Topics, keywords search terms
- Other captured metrics

3. Services Review – Results

Target Audience



Persona applied to online channels.

Listen & Qualify



Qualify audiences over-time.

Build & Activate



Convert social conversations to new customers.

Results

- Research & discovery.
- Validate consumers.
- Global reach.



- Brand and product attributes.
- Consumer feedback.
- Measurable ROI.



Built on Microsoft Azure delivering high performing, big data analysis.

4. Case Study #1 – Online Consumer Engagement

iSwarm identified online audiences for a client across the **adoption stages** to create a hyper-targeted, efficient consumer engagement.

1) Discovery

Early Market

Mainstream

Typical consumer adoption stages

Innovators

Early Adopters

Chasm

Early Majority

Late Majority

Laggards

iSwarm pre-qualifies and engages with online influencers, key opinion leaders, evangelists, innovators and niche communities.

iSwarm targets mainstream, conservative and economical markets to help clients cross and succeed beyond the adoption lifecycle chasm.

2) Activate

Target Audience



Consumer persona applied to online channels and data sources.

Listen & Qualify



Qualify audiences over-time.

Build & Activate



Create assets and campaigns.
Activate new customers.

Results



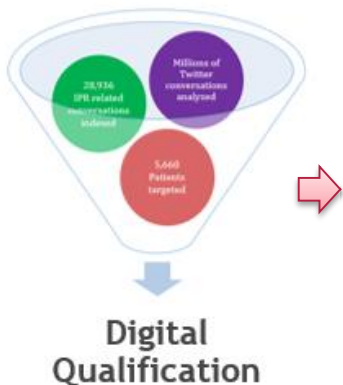
Measure campaign results, feedback and iterate.

4. Case Study #2 – Clinical Trial Recruitment (BMS)

iSwarm accelerated clinical trial recruitment for a **Top 10 Pharma** client with a 6-month tailored engagement campaign targeting early stage esophageal and early stage lung cancer.

KEY BENEFITS:

- Identify and Engage Early-Adopter Candidates.
- +17% Conversation Rates.
- Measurable ROI & Global Reach.
- Reduced Online Ad Engagement Cost by 76%.



Trial Landing Page



In-Channel Marketing and Activation

HIGHLIGHTS:

Patient engagement model:

- Qualified candidates messaged through channel advertising, sponsored & promoted messaging and website banner ads.
- Ads included custom link to clinical, commercial, informational and recruitment specific site levels.
- Messaging via CROs and patient advocacy groups.

4. Case Study #3 –Treatment Acquisition (MSD)

iSwarm accelerated osteoarthritis treatment acquisition for a **Top 10 Pharma** client by reaching thousands of new customers over a 90-day global campaign.

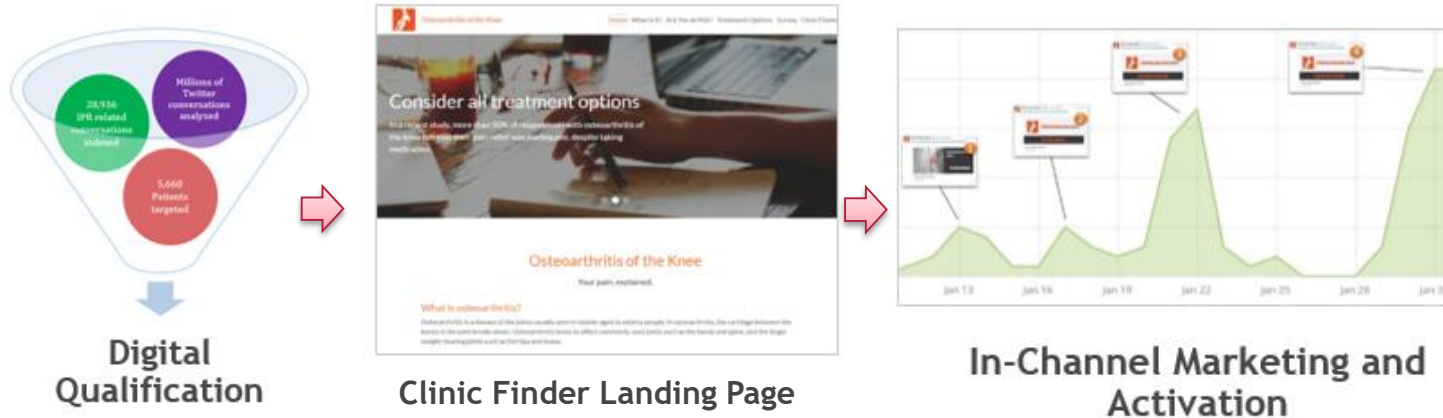
KEY BENEFITS:

- Identify and Engage Late-Majority Candidates.
- HIPAA Compliant Web Assets.
- +20% Conversation Rates.
- Measurable ROI & Global Reach.

HIGHLIGHTS:

Patient engagement model:

- Qualified candidates messaged through channel advertising, sponsored & promoted messaging and website banner ads.
- Ads included custom link to clinical, commercial, informational and recruitment specific site levels.
- Messaging via CROs and patient advocacy groups.



4. Case Study #4 – Financial Svcs: Trader Compliance iSwarm™

Powered by **INFO N GEN**

iSwarm delivers **speech to text** transcript conversion into **InfoNgen** financial services supporting **Bank and Investment Trading** best practices.

1) Data Integration

- Connect to unstructured trade data sources (text, voice, email, IM, social media etc.)
- Automatically structure data based on taxonomies and tolerance thresholds.
- Aggregate and contextualize pre and post-trade communications.



samples3/Exploring **Insider Trading** Forums on the Darknet.wav

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1 message

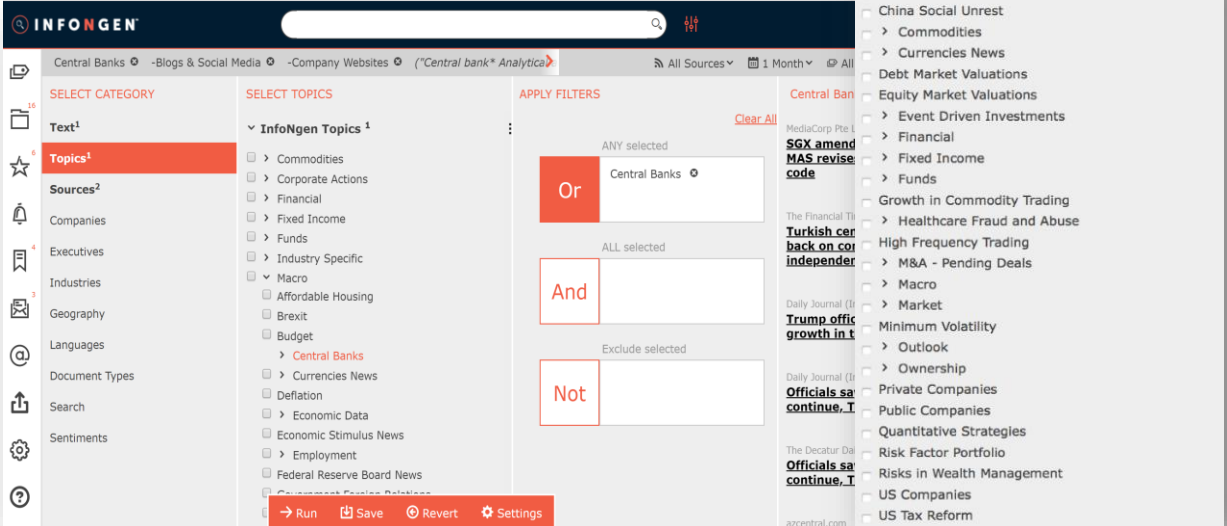
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who's interested in earning money through a little bit of corruption, so the way this works for those of you unfan companies usually called Blue Chip stocks right like Google, Facebook. Every company that's large that has quart especially if it's bad news. 'cause word travels around very quickly one of the lower level. Employees someone w coffee they? At lunch with them, they might over here, while walking to the bathroom. Or maybe the right there . could disrupt a company or could enable another individual to make profit off of that. But if you happen to see it that you got that information from **insider trading**. Maybe just decided. Hey, I'm going to invest this and this amc

2) Platform Delivery

- Centralized repository to manage, asses and escalate flagged communications.
- Refine or create new trade tolerances to test against.
- Team delivery platform to initiate review or discard audit trail.

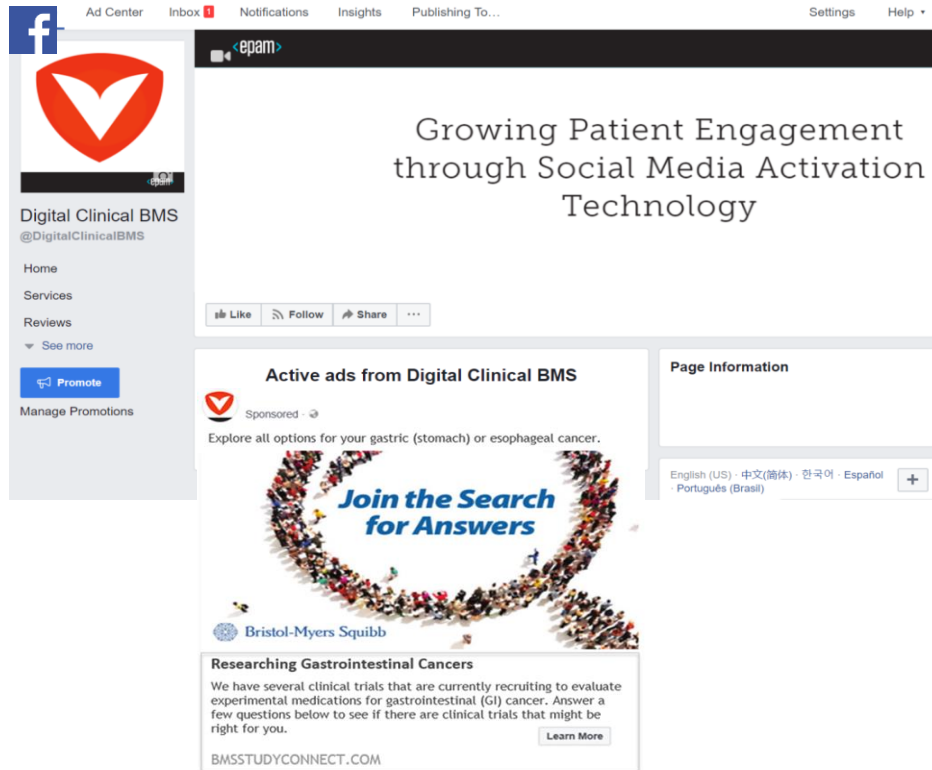


The screenshot displays the InfoNgen platform interface. At the top, there is a search bar and navigation tabs for 'Central Banks', 'Blogs & Social Media', 'Company Websites', and 'Central bank Analytics'. Below this, a 'SELECT CATEGORY' sidebar lists various categories like Text, Topics, Sources, Companies, etc. The 'SELECT TOPICS' section shows a tree view of 'InfoNgen Topics' with sub-categories such as Commodities, Corporate Actions, Financial, Fixed Income, Funds, Industry Specific, Macro, Affordable Housing, Brexit, Budget, Central Banks, Currencies News, Deflation, Economic Data, Economic Stimulus News, Employment, Federal Reserve Board News, and Government Policy Relations. The 'APPLY FILTERS' section includes options for 'ANY selected', 'ALL selected', and 'Exclude selected', with 'Or', 'And', and 'Not' operators. A 'Clear All' button is also present. On the right, there is a list of 'Investment Topics' including Bitcoin, China Social Unrest, Commodities, Currencies News, Debt Market Valuations, Equity Market Valuations, Event Driven Investments, Financial, Fixed Income, Funds, Growth in Commodity Trading, Healthcare Fraud and Abuse, High Frequency Trading, M&A - Pending Deals, Macro, Market, Minimum Volatility, Outlook, Ownership, Private Companies, Public Companies, Quantitative Strategies, Risk Factor Portfolio, Risks in Wealth Management, US Companies, and US Tax Reform.

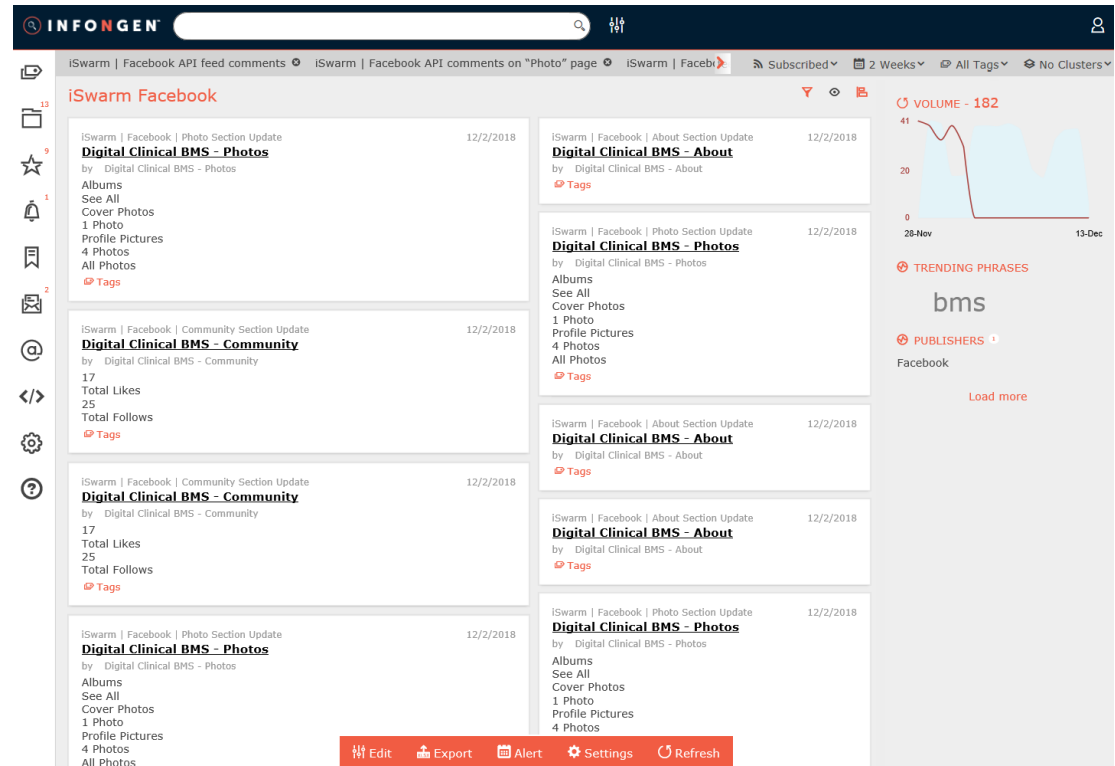
4. Case Study #5 – Asset Monitoring & Notifications (BMS)

Real-time monitoring and scheduled notifications of external and internal user activity across company responsible online assets.

BMS sponsored fanpage.



InfoNgen platform provides team delivery and notification service.



4. Case Study #6 – LS: Pharmacovigilance (AZ)

iSwarm provides **real-time** and **scheduled notifications** of user activity across **Top 10 Pharma** client responsible online assets. Integrated team workflow utilizing the **InfoNgen** platform delivers **Pharmacovigilance** compliance.

1) Data Integration



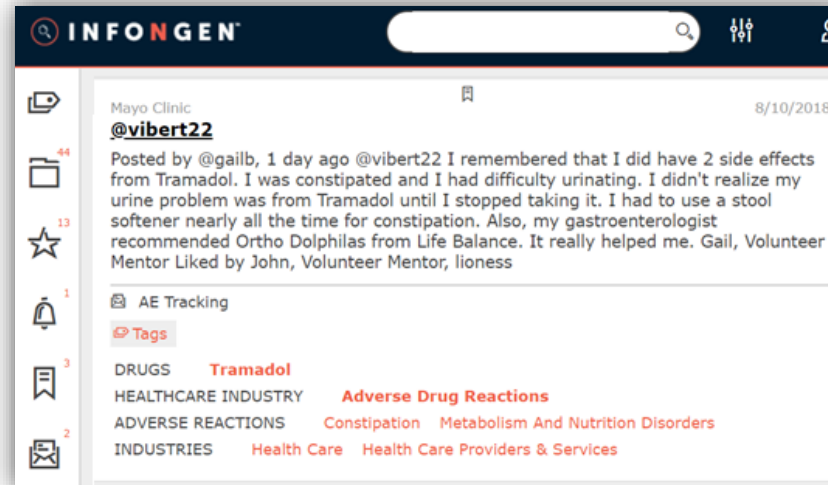
Mine online channels, social networks, email and other company online assets.

2) Automated Detection



Monitor customer inputs, healthcare content and potential adverse and special-events.

3) Review Platform



Team delivery platform to Verify, Discard or Escalate potential harmful or special-case events.

4) Escalate



Integrated service into Pharmacovigilance and compliance procedures.

5. EPAM's Digital Strategy – DEP Services



DIGITAL STRATEGY & EXPERIENCE DESIGN

COMPETENCY CENTER

- Digital Business Consulting
- Service Design
- Experience Design
- Brand Management
- Personalization
- Innovation As A Service
- Applied Data

1,480+
STRATEGY &
DESIGN
CONSULTANTS



DIGITAL MARKETING

COMPETENCY CENTER

- Platform Centric
- Connected Architectures
- Content Strategy
- Campaign Management
- Social/ User Generated Content
- Managed Content Services
- Publishing

500+
STRATEGISTS
ENGINEERS &
ARCHITECTS

15+ YEARS EXPERIENCE

1,000+ PROJECTS



MOBILE

COMPETENCY CENTER

- Mobility Strategy
- Omni-channel Strategy
- User Experience
- Product Development
- Product Maintenance

400+
MOBILE
ENGINEERS &
ARCHITECTS



COMMERCE

COMPETENCY CENTER

- Platform Centric
- Omni-commerce For B2B/B2C
- Connected Architectures
- Store Systems
- Multi-region Deployments
- Managed Hosting
- Supply Chain

960+
COMMERCE
ENGINEERS &
ARCHITECTS

10+ YEARS EXPERIENCE

300+ MOBILE APPS

500+ MOBILE SITES

13+ YEARS EXPERIENCE

400+ HYBRIS PROFESSIONALS



Thank You

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Appendix. Services Review – Setup

BUSINESS CASE	PERSONA DEVELOPMENT AND QUALIFICATION	MARKETING AND OUTPUT BASELINE (IF APPLICABLE)
<ul style="list-style-type: none">• Engagement Goals.• Importance of Location.• Existing Web Presence / Landing Site.• Third Party Involvement (CRO, Advocacy).• Focused Brand, Product and Consumer Attributes.	<ul style="list-style-type: none">• Business Model (B2C, B2B, etc.)• Existing SEO / Marketing Keywords.• Social Channel Selection.• Inclusion Criteria• Exclusion Criteria (Common False Positives / Terms or Phrases to Avoid).	<ul style="list-style-type: none">• Estimated Cost Per Consumer• Engagement Budget Estimates.• Current Engagement Process.• Existing Engagement Collateral.• Output Requirements.• System Integration Requirements.