

Subject - Managing Digital Innovation and Transformation
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A collection of military medals and a compass on a wooden surface. The medals include a red ribbon with a circular emblem, a blue ribbon with a circular emblem, and two silver Maltese crosses with circular centers. A pair of gold-rimmed glasses is also visible. In the bottom left corner, there is a circular compass with a white face and black markings.

Managing Digital Innovation and Transformation

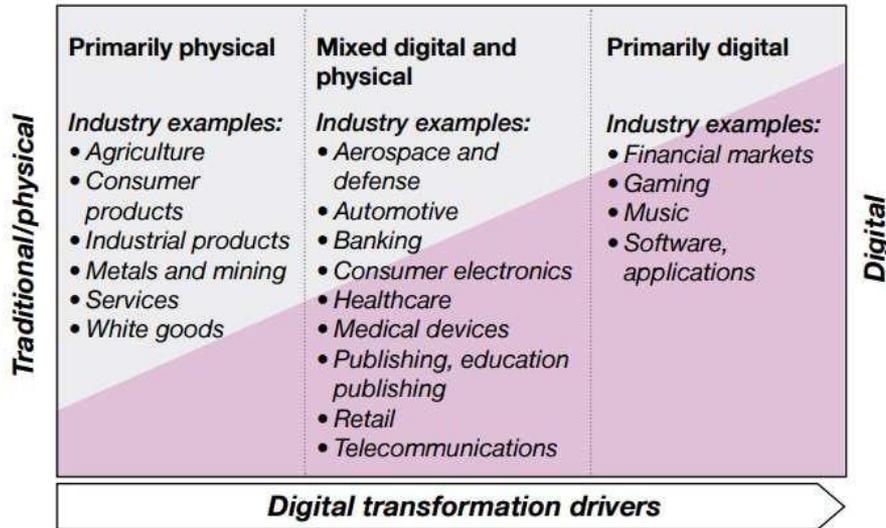
Digital transformation is the process of using digital technologies to create new — or modify existing — business processes, culture, and customer experiences to meet changing business and market requirements. ... It transcends traditional roles like sales, marketing, and customer service.



Digital Transformation is the use of new, fast and frequently changing digital technology to solve problems. It often utilizes cloud computing, reducing reliance on user owned hardware but increasing reliance on subscription based cloud services.

Degree of Product and Service Digitization

Digital transformation drivers are pushing industries along the physical-digital continuum.



How do companies determine the best strategy for digital transformation?

- **Identify transformation opportunities based on a thorough understanding of digital transformation in the industry**
- **Redefine the value proposition based on what existing and prospective customers are likely to pay for going forward**
- **Design the optimized operating model that combines organizational capabilities and technology requirements**
- **To execute the strategy, redefine the operating model as needed to support the new value proposition**
- **Continuously evolve using customer insight and advanced analytics**

What is Digital India?

- Digital India is a **Programme to prepare India for a knowledge future.**
- The focus is on being **transformative – to realize IT + IT = IT**
- The focus is on making **technology central to enabling change.**
- It is an **Umbrella Programme** – covering many departments.
 - It weaves together a large number of ideas and thoughts into a **single, comprehensive vision** so that each of them is seen as part of a largergoal.
 - Each individual element stands on its own. But is also part of **the larger picture.**
 - It is **coordinated by DeitY, implemented by the entire government.**
 - The weaving together makes the Mission **transformative in totality**
- The Programme:
 - Pulls together many **existing schemes.**
 - These schemes will be **restructured and re-focused.**
 - They will be **implemented in a synchronized manner.**
 - Many elements are only **process improvements with minimal cost.**
- The **common branding** of programmes as **Digital India** highlights their transformative impact.

Vision of Digital India

Centered on 3 Key Areas

- Digital Infrastructure as a Utility to Every Citizen
- Governance & Services on Demand
- Digital Empowerment of Citizens

Vision Area 1: Infrastructure as a Utility to Every Citizen

- **High speed internet** as a core utility
- **Digital identity** -unique, lifelong, online, authenticable
- **Mobile phone & Bank account** enabling participation in digital & financial space
- Easy access to a **Common Service Centre**
- Shareable **private space on a public cloud**
- **Safe and secure Cyber-space**

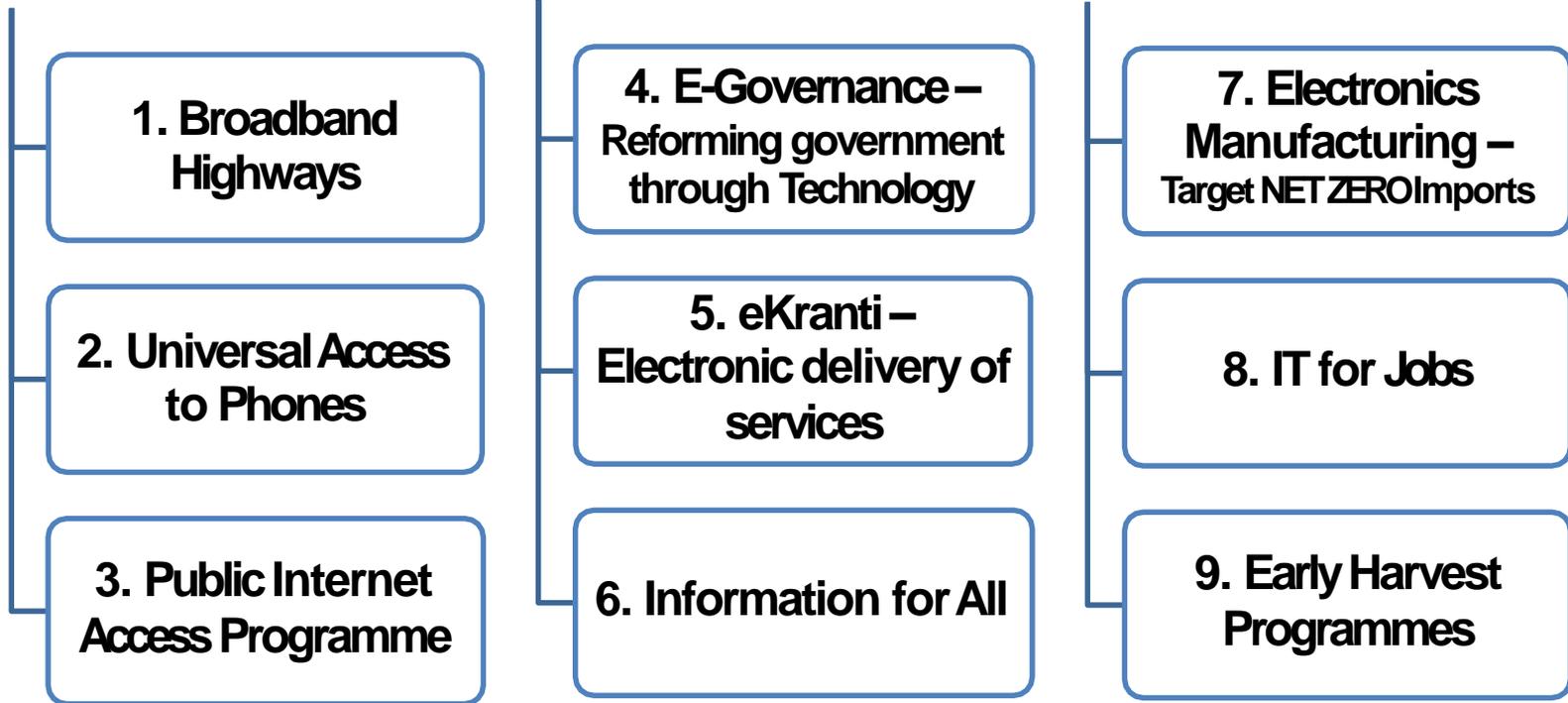
Vision Area 2: Governance & Services On Demand

- **Seamlessly integrated** across departments or jurisdictions
- Services **available in real time** from online & mobile platform
- **All citizen entitlements** to be available **on the cloud**
- Services digitally transformed for improving Ease of Doing Business
- Making **financial transactions electronic & cashless**
- Leveraging GIS (Geographical Information System) for **decision support systems & development**

Vision Area 3: Digital Empowerment of Citizens

- Universal **Digital Literacy**
- Universally accessible **digital resources**
- **All documents/ certificates to be available on cloud**
- Availability of digital resources / services in **Indian languages**
- **Collaborative digital platforms** for participative governance
- **Portability** of all entitlements through **cloud**

Nine Pillars of Digital India



Pillar 1. Broadband Highways

Broadband for all Rural

- Coverage: 250,000 GP
- Timeline: December 2016
- CAPEX: Rs32,000 Cr
- Nodal Dept: DoT

1yr: 50,000 GP
2yr: 100,000 GP
3yr: 100,000 GP

Broadband for all Urban

- Virtual Network Operators for service delivery.
- Mandate communication infrastructure in new urban development and buildings.

Changes in Rules to facilitate.

National Information Infrastructure

- Coverage: Nationwide
- Timeline: March 2017
- Cost: Rs 15,686 Cr
- Nodal Dept: DeitY

Integration of SWAN, NKN, NOFN. To be implemented in 2 years

Pillar 2. Universal Access to Mobile connectivity

Universal Access to mobile connectivity

- **Coverage:** Remaining uncovered villages (~ 42,300 villages)
- **Timeline:** FY 2014-18
- **Cost:** Rs16,000 Cr
- **Nodal Dept:** DoT

Ongoing Programme
Increased network penetration & coverage of gaps

Pillar 3. Public Internet Access Programme – National Rural Internet Mission

CSCs—(Common Service Centre)

made viable, multi-functional end-points for service delivery

- **Coverage:** 2,50,000 villages (now 130,000)
- **Timeline:** 3 Years - March 2017
- **Cost:** Rs4750 Cr
- **Nodal Agency:** DeitY

Ongoing Programme

Reach of Govt. services to all GPs

Post Offices

to become

Multi-Service Centres

- **Coverage:** 1,50,000 Post Offices
- **Timeline:** 2 Years
- **Nodal Agency:** D/o Posts

This should be long term vision for POs

Pillar 4. e-Governance: Reforming Government through Technology

- Government **Business Process Re-engineering** using IT to improve transactions
 - Form Simplification, reduction
 - Online applications and tracking, Interface between departments
 - Use of online repositories e.g. school certificates, voter ID cards, etc.
 - Integration of services and platforms – UIDAI, Payment Gateway, Mobile Platform, EDI
- **Electronic Databases** – all databases and information to be electronic, not manual
- **Workflow automation** inside government
- **Public Grievance Redressal** - using IT to automate, respond, analyse data to identify and resolve persistent problems – largely process improvements
- **To be implemented across government - critical for transformation**

Pillar 5. eKranti - Electronic Delivery of Services

- **Technology for Education – e-Education**
 - All Schools connected with broadband
 - Free wifi in all schools (250,000)
 - Digital Literacy program
 - MOOCs – develop pilot Massive Online Open Courses
- **Technology for Health – e-Healthcare**
 - Online medical consultation
 - Online medical records
 - Online medicine supply
 - Pan-India exchange for patient information
 - Pilots – 2015; Full coverage in 3 years
- **Technology for Planning**
 - GIS based decision making
 - National GIS Mission Mode Project
- **Technology for Farmers**
 - Real time price information
 - Online ordering of inputs
 - Online cash, loan, relief payment with mobile banking
- **Technology for Security**
 - Mobile Emergency Services
- **Technology for Financial Inclusion**
 - Mobile Banking
 - Micro-ATM program
 - CSCs/ Post Offices
- **Technology for Justice**
 - e-Courts, e-Police, e-Jails, e-Prosecution
- **Technology for Security**
 - National Cyber Security Co-ordination Center

Ongoing Programme (NeGP) – will be revamped to cover these elements

Pillar 6. Information for All

- **Online Hosting of Information & documents**
 - Citizens have open, easy access to information
 - Open data platform
- **Government pro-actively engages through social media** and web based platforms to inform citizens
 - MyGov.in
 - **2-way communication** between citizens and government
- **Online messaging** to citizens on special occasions/programs
- **Largely utilise existing infrastructure** – limited additional resources needed

Pillar 7. Electronics Manufacturing

Target NET ZERO IMPORTS by 2020

- **Target NET ZERO Imports is a striking demonstration of intent**
- **Ambitious goal** which requires coordinated action on many fronts
 - Taxation, Incentives
 - Economies of Scale, Eliminate cost disadvantages
 - **Focused areas – Big Ticket Items**
 - FABS, Fab-less design, Set top boxes, VSATs, Mobiles, Consumer & Medical Electronics, Smart Energy meters, Smart cards, micro-ATMs
 - Incubators, clusters
 - Skill development
 - Government procurement
- There are many ongoing programs which will be fine-tuned.
- **Existing Structures inadequate to handle this goal. Need strengthening.**

Pillar 8. IT for Jobs

Train people in smaller towns & villages for IT sector jobs

- Coverage: 1 Crore students
- Timeline: 5 years
- Cost: Rs 200 Cr for weaker sections
- Nodal Agency: DeitY

New Scheme

IT ready workforce

IT/TES in NE

- Scope: Setting up of BPO per NE State
- Coverage: NE States
- Nodal Agency: DeitY

ICT enabled growth in NE

Train Service Delivery Agents to run viable businesses delivering IT services

- Coverage: 3,00,000
- Timeline: 2 Years
- Nodal Agency: DeitY

Ongoing

Skilled VLEs and Viable CSCs

Telecom service providers to train rural workforce to cater to their own needs

- Coverage: 5,00,000
- Timeline: 5 Years
- Nodal Agency: DoT

Telecom ready workforce

Pillar 9. Early Harvest Programmes

IT platform for messages

- Coverage: Elected representatives, All Govt employees
- 1.36 Cr mobiles and 22 Lakh emails
- Mass Messaging Application developed

Targeted Mass messaging since July 14

Government Greetings to be e-Greetings

- Basket of e-Greetings templates available
- Crowd sourcing of e-Greetings thru MyGov
- e-Greetings Portal ready by 14 August 2014

1st e-Greeting from PM on 15th Aug 2014

Biometric attendance

- Coverage: All Central Govt. Offices in Delhi
- Operational in DeitY & Initiated in Urban Development
- On-boarding started in other depts
- Procurement of devices – tender issued

To be completed by Oct 2014

Pillar 9. Early Harvest Programmes

Wi-fi in All Universities

- Scope: All universities on NKN
- 400 additional Universities
- Cost: Rs790 Cr

Approval - Oct 2014
Implementation
done by Dec 2015

Secure email within government

- Phase I upgradation for 10 Lakh employees done
- Ph II for 50 Lakh employees by March 2015
- Cost: Rs98 Cr

Email to be primary
mode of
communication

Standardize government email design

- Standardised templates under preparation

To be ready by
October 2014

Pillar 9. Early Harvest Programmes

Public wifi hotspots

- **Coverage:** Cities with pop > 1 Mill., tourist centres
- **Nodal Agency:** DoT/ MoUD

**Digital Cities
Completed by Dec
2015**

School Books to be eBooks

- **Nodal Agency:** MHRD/ DeitY

**Completed by Mar
2015**

SMS based weather information, disaster alerts

- **DeitY's Mobile Seva Platform ready**
- **Nodal Agency:** MoES (IMD) / MHA (NDMA)

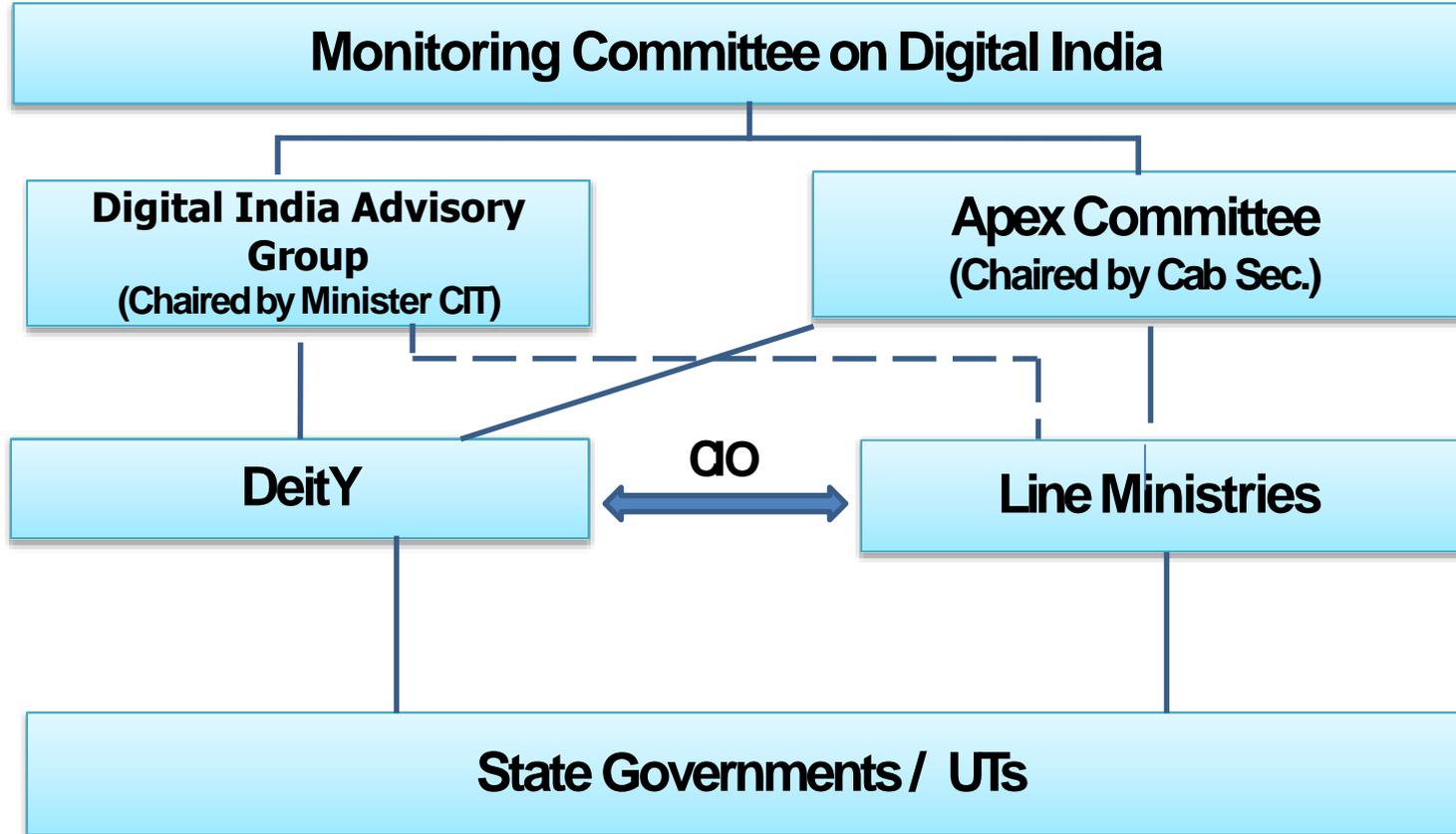
**In place by Dec
2014**

National Portal for Lost & Found children

- **Nodal Agency:** DeitY/ DoWCD

**In place by Oct
2014**

Institutional Mechanisms at National Level



Composition of Monitoring Committee on Digital India

- **Prime Minister – Chairman**
- Finance Minister
- Minister of Communications & IT
- Minister of RD
- Minister of HRD
- Minister of Health

Special Invitees:

- Principal Secretary to PM
- Cabinet Secretary
- Secretaries of Expenditure, Planning, DoT and Posts
- Secretary, DeitY – Convener

DIGITAL INDIA

MINISTER
(Communications & IT)

SECRETARY
(DeitY)

Reorganisation of NIC

CIOs in important Ministries

Addl. Secretary
(e-Gov)

Joint Secretary
(Electronics Hardware
Manufacturing)

Joint Secretary
(Personnel, Admn. &
Industry Promotion S/W)

Addl. Secretary
(Digital India)

Electronic Manufacturing –
Target Net Zero Imports

Joint Secretary
(e-Gov)

Joint Secretary
(Infrastructure
Development)

Joint Secretary
(Capacity Building &
Digital Enablement
of Citizens)

Joint Secretary
(IT applications in un-
covered areas &
Process Re-engineering)

Electronic Delivery of
Services - eKranti

Public Internet Access
Programme

Technology for Jobs

Information for All

E-Governance: Reforming
Government through
Technology

Estimated Costs and Impacts

■ Overall Costs of Digital India

- ~ Rs100,000 Cr in ongoing schemes (only DeitY, DOT & not incl. those in other line Ministries)
- ~ Rs13,000 Cr for new schemes & activities

■ Impact of Digital India by 2019

- Broadband in 2.5 lakh villages, universal phone connectivity
- Net Zero Imports by 2020
- 400,000 Public Internet Access Points
- Wi-fi in 2.5 lakh schools, all universities; Public wi-fi hotspots for citizens
- Digital Inclusion: 1.7 Cr trained for IT, Telecom and Electronics Jobs
- Job creation: Direct 1.7 Cr. and Indirect at least 8.5 Cr.
- e-Governance & eServices: Across government
- India to be leader in IT use in services – health, education, banking
- Digitally empowered citizens – public cloud, internet access

Challenges & Changes Needed

- **Program on this scale never conceived**
- **Each Pillar/program has own challenges**
- **Human Resource Issues**
 - NIC - not equipped for a fraction of this task (obsolesce) - needs revamping & restructuring
 - DeitY – needs program managers – at least 4 more officers at senior levels
 - **Ministries – Need a Chief Information Officer / Chief Technology Officer (CIO/CTO)**
 - Could begin with CIOs 10 major Ministries
 - Can be anyone – from within or outside government
 - To be patterned as AS & FAs – dual reporting
- **Financial Resource Issues**
 - Mostly structured around ongoing programs : Better focus, need some restructuring
 - Some others are process improvements or better utilisation of resources
 - A few new programs may be needed – particularly in Electronics manufacturing and Skill Development
- **Coordination Issues**
 - Program covers many other departments
 - Need commitment and effort
 - Leadership and support critical for success

Five domains of digital transformation

1) Customers – Exploit customer networks

After the mass production (one product to serve as many customers as possible) and mass communication (consistent message and medium to reach and persuade as many customers as possible at same time) called mass market, in the digital age, it is changed to customer network. In this model, customers are dynamically connected and influencing others, shaping business reputations and brands, then their use of digital tools is impacting how they discover, evaluate, purchase, and use products and how they share, interact and stay connected with brands. Based on these changes, it is necessary to rethink the traditional marketing funnel and reexamine the customers' path to purchase, close of all steps including social networks, search engines, mobile or laptop screens, to walking into a store, to asking for customer service in a live online chat.

2) Competition – Build platforms, not just products

The second domain of digital transformation is how businesses compete and cooperate with other firms, and based on the tradition, these concepts were seen as binary opposites, compete with rival business and cooperate with supply chain partners, generating the Digital “disintermediation”, when the longtime business partner may become our biggest competitor after serving our customers directly. Nowadays, we see a World of fluid industry boundaries, including asymmetric competitors, companies from outside of an industry that look nothing with it however offering value to these customers, as well as cooperation with a direct rival due to interdependent business model or mutual challenges from outside this industry.

3) Data – Turn data into assets

This domain is about how businesses produce, manage and utilize information. Traditionally data was produced in a variety of business' own process – manufacturing, operations, sales and marketing with this resulting data used mainly for evaluating, forecasting and decision making. Nowadays, we are faced with a data flood, with many different sources, including every conversation, interaction, or process inside or outside these businesses, generated by a river of unstructured data from social media, mobile devices and sensors on every object in a company's supply chain. These “big data” permits new kind of predictions, discover unexpected patterns in business activity, and unlock new sources of value. Based on this, data is a vital part of how business does this operation process, differentiates itself and creates new value in the market

4) Innovation – Innovate by rapid experimentation

The innovation process, when new ideas are developed, tested, and brought to the market by businesses, it was traditionally managed with a singular focus on the finished product, based on the analysis and intuition of managers, considering the expectation to avoid the high cost of failure. Nowadays, the start-ups have shown that digital technologies can offer very different approach to innovation, one based on continuous learning through rapid experimentation, and then it is easier and faster to test ideas and receive market feedback since the beginning of the innovation process. This new approach of innovation is focused on careful experiments and on minimum viable prototypes that maximize learning while minimizing costs. Assumptions are validated with real customers and products are developed iteratively through a process that saves time reduces the cost of failures, and improve organization learning.

5) Value – Adapt your value proposition

The way that customers perceive a brand defines the value proposition of the companies. Traditionally, a firm's value proposition was seen as fairly constant, because the products may be updated, operation process improved, marketing campaigns refreshed but the basic value offered by a business was assumed to be constant and defined by its industry. The successful business includes a clear value proposition, finding a point of market differentiation and focused on executing and delivering the best version of the same value proposition to its customers month after month. Nowadays, the only sure response in a business environment is the path of constant evolution, on way to extend and improve the value proposition to its customers. On this way, adapting is the best response when change becomes a matter of life or death, businesses need to focus on enjoy emerging opportunities, staying ahead of the curve of change.

Classification of Digital Transformation

Process Transformation A significant focus of corporate activity has been in business processes. Data, analytics, APIs(application program interface), machine learning and other technologies offer corporations valuable new ways to reinvent processes throughout the corporation—with the goal of lowering costs, reducing cycle times, or increasing quality. We see process transformation on the shop floor where companies like Airbus have engaged heads-up display glasses to improve the quality of human inspection of airplanes. We also see process transformations in customer experience, where companies like Domino's Pizza have completely re-imagined the food ordering process; Dominos' AnyWare lets customers order from any device. This innovation increased customer convenience so much that it helped push the company to overtake Pizza Hut in sales. And we see companies implementing technologies like robotic process automation to streamline back office processes like accounting and legal, for example. Process transformation can create significant value and adopting technology in these areas is fast becoming table-stakes. Because these transformations tend to be focused efforts around specific areas of the business, they are often successfully led by a CIO or CDO.

Business Model Transformation Some companies are pursuing digital technologies to transform traditional business models. Whereas process transformation focuses on finite areas of the business, business model transformations are aimed at the fundamental building blocks of how value is delivered in the industry. Examples of this kind of innovation are well-known, from Netflix' reinvention of video distribution, to Apple's reinvention of music delivery (I-Tunes), to Uber's reinvention of the taxi industry. But this kind of transformation is occurring elsewhere. Insurance companies like Allstate and Metromile are using data and analytics to un-bundle insurance contracts and charge customers by-the-mile—a wholesale change to the auto insurance business model. And, though not yet a reality, there are numerous efforts underway to transform the business of mining to a wholly robotic exercise, where no humans travel below the surface.

The complex and strategic nature of these opportunities require involvement and leadership by Strategy and/or Business Units and they are often launched as separate initiatives while continuing to operate the traditional business. By changing the fundamental building blocks of value, corporations that achieve business model transformation open significant new opportunities for growth. More companies should pursue this path.

Domain Transformation An area where we see surprisingly little focus—but enormous opportunity—is the area of domain transformation. New technologies are redefining products and services, blurring industry boundaries and creating entirely new sets of non-traditional competitors. What many executives don't appreciate is the very real opportunity for these new technologies to unlock wholly new businesses for their companies beyond currently served markets. And often, it is this type of transformation is that offers the greatest opportunities to create new value.

A clear example how domain transformation works may be the online retailer, Amazon. Amazon expanded into a new market domain with the launch of Amazon Web Services (AWS), now the largest cloud computing/infrastructure service, in a domain formerly owned by the IT giants like Microsoft and IBM. What made Amazon's entry into this domain possible was a combination of the strong digital capabilities it had built in storage, computing databases to support its core retail business coupled with an installed base of thousands of relationships with young, growing companies that increasingly needed computing services to grow. AWS is not a mere adjacency or business extension for Amazon, but a wholly different business in a fundamentally different market space. The AWS business now represents nearly 60% % of Amazon's annual profit.

Cultural/Organizational Transformation Full, long-term digital transformation requires redefining organizational mindsets, processes, and talent & capabilities for the digital world. Best-in-class corporations recognize digital requires agile workflows, a bias toward testing and learning, decentralized decision-making, and a greater reliance on business ecosystems. And they take active steps to bring change to their organizations. Experian, the consumer credit agency and one of the most successful digital transformations, changed its organization by embedding agile development and collaboration into its workflows and by driving a fundamental shift in employee focus from equipment to data, company-wide. Similarly, Pitney Bowes, the 100-year old postage equipment company, made the successful transition to become a “technology company” by promoting a “culture of innovation,” according to its head of innovation, and by shifting company values to focus on customer-centricity.

Product Development

Not being shy to use technology to solve customer problems. For example, a coffee shop that tracks their supply such that they are able to name the exact farmers who produced a particular cup of coffee. May address customer related to sustainability.

Data

Advancing the use of data to discover strategies, optimize operations, manage risk and improve decisions. For restaurant chain that experiments with hundreds of new menu items at different locations to collect data and that work unusually well to be launched across a region.

Knowledge

Practices and tools to avoid knowledge loss and knowledge waste.

Self-service

Providing technologies that allow everyone in your organization to explore data, share knowledge and development

Social media transformation

Social media provides the potential to interact with users who are highly involved, and to build relationships with individuals, who will then represent the organization in a positive way to their social media communities . Social media campaigns, if they are well integrated, provide a synergistic form of interaction and diffusion to large numbers of consumer, and have the potential to change the organization's message from being perceived as a commercial source of information to being perceived as a social source – we call this the social media transformation process

- Rarely a “stand alone” marketing activity
- Delivers amplification – for better or for worse
 - If your products fail they will fail worse with social media
 - But if they succeed they will succeed better with social media

Social media

It's not just about marketing



Social media

Key social campaign elements

- Planning and understanding
- Creating innovative content
- Generating engagement
- Measurement and ROI

Social media

Where to invest

- 10% planning: audience and objectives
- 20% content creation
- 30% audience engagement
 - 80% Target audience direct
 - 20% Influencers e.g. blogger outreach
- 30% content promotion
 - Core channel (e.g. Facebook)
 - Complementary channels (e.g. Pinterest & YouTube)
 - Trial channels (e.g. Vine)
- 10% measurement and learning

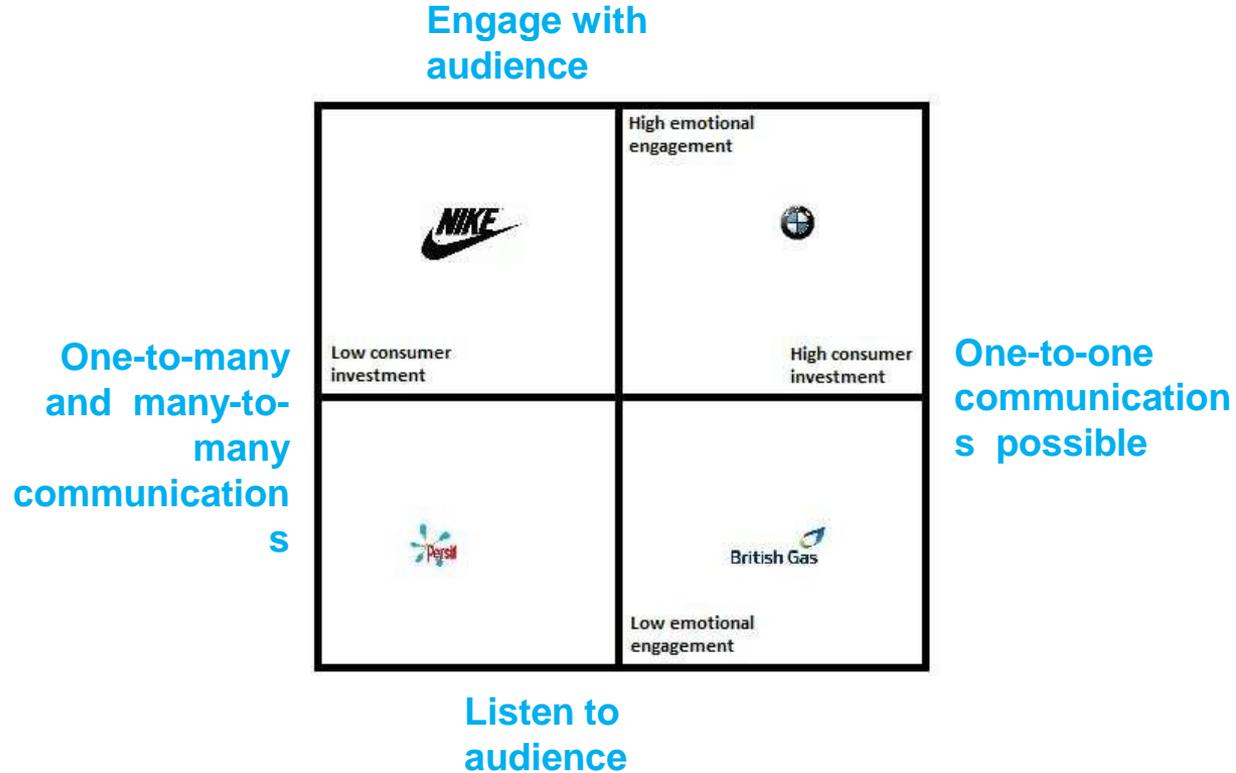
Social media

Planning: Who, where, what?

- SMART objectives
 - What do you want to achieve: website traffic, leads, brand engagement, SEO...
- Understanding your audience
 - Where is your audience (platforms, trends)
 - What are they interested in (psychographics)
 - What are your competition doing?

Social media

The right strategy



Social media

Planning: idea generation

- Idea generation can be hard!
 - Book of ideas
 - Brainstorming
 - News, company news, industry news
 - Seasonal changes
 - Other people's ideas reinterpreted or disputed
- Different ideas may have different primary content formats: video, graphics or text

Social media

Planning: content management

- Roles of different platforms
- Tone of voice (across platforms)
- Naming ideas for salience (easy if you are Vodafone, hard if you are Orange)
- Rules of engagement with consumers
- Management and escalation plans

Social media

Planning: editorial calendar

- Publication date
- Theme and subject
- Audience/persona
- Keywords
- Author
- Sign off
- Channel
- Purpose/Call to action

Planning: great content...

- Has a purpose: business-focussed calls to action
- Is relevant and interesting (e.g. topical)
- Has interest hooks (headline, first sentence, last sentence)
- Generates engagement with the brand or with other consumers
- Is well delivered:
 - Personal tone of voice
 - Appropriate grammar and spelling
 - Frequently contains images

Social media

Planning: content creation and the multiplier effect

- **Repurpose content: text, images, video**
 - 1 whitepaper might yield 3 blogs, 10 tweets, 1 info-graphic
- **Reuse content**
 - In different channels
 - At different times
- **One content idea repurposed 3 times and reused 3 times = nine content pieces**

Social media

Audience engagement

- Proactive promotion of engagement
 - Explore (calls to action)
 - Share (rewards)
 - Respond (questions, competitions)
- Reaction to consumers who engage
 - Positive: Reply to comments/thank followers etc
 - Negative: Manage but don't argue
- Don't forget about email!

Social media

Engaging with influencers

- Influencers
 - Who and where are they
 - How to persuade them to engage
- Top fans – reward them: they may be influencers one day!

Social media

Content promotion

- Regular posting
 - Not just 9 to 5
 - Not every hour/day is equal: experiment
- Paying for exposure
 - Paying social media platforms to increase exposure also helps you control a campaign
 - Not the same thing as paying for followers!
- Make it easy for people to “follow” you on your website, your emails, your blog etc
 - You could even ask them (but don’t beg!)

Social media

Measuring ROI

- Leads
- Measurable behaviour
 - Website activity
 - Indicators (Likes etc)
- Changes to brand perceptions

Social media

Take care with measurement

- Need to understand what the data really mean
 - How many people will actually see your content?
 - Is a simple action such as a “Like” worth much?
- Twitter example:
 - “Reach” is potential reach of a tweet: followers and followers of re-tweeters
 - One Twitter user on average:
 - Follows 100 people, who each tweet 5 times/day
 - Therefore is shown 500 tweets/day
 - Real reach is nearer 100 than 500!
 - Because user spends only 5 minutes/day on Twitter

Social media

Paying for exposure

- Paid, owned and earned media
 - Paid and earned drive traffic to owned media
 - Paid generates more earned media
 - Paid is essential as social platforms downgrade “organic” content
- Marketing activity
 - Integrate messaging and timing
- Consider offline activity if possible (e.g. events)

Social media

Customer experience

- Optimise for mobile devices and mobile behaviour
- Make it easy and intuitive

1. Social listening

Does your social media strategy have time for posting, but give short shrift to listening to your followers? If you're not paying attention to your social media feeds (and those of your competitors), you're missing a lot of valuable information. Sure, reading every post can be time-consuming, but there are social media monitoring tools that can help.

So what can you gain with social listening? You'll learn what people think about your brand, including problems they're having and ways you can better serve your audience — both of which will help drive success.

2. Live video

Over the past few years, live video has become perhaps the most engaging content on social media, outperforming regular video six-fold on Facebook. Before you go live, just remember to be authentic, embrace spontaneity and allow for unexpected moments to occur and you'll connect with your audience.

3. Chatbots

Early chatbots were clunky, limited and sometimes awkward. But they've come a long way and 2019 is shaping up to be the year when they finally live up to the hype. If you're not already using them in your social media strategy, there's never been a better time to start.

4. Direct messaging

Who doesn't like a little personal attention? When you send direct messages to your followers, they'll feel noticed and appreciated and will be more likely to engage with your content. Try DMing your followers about upcoming events, new products or offer them special discount codes for starters.

5. Augmented reality

As has been reported, Facebook is currently testing augmented reality advertisements in its News Feed. Once they go live across the site, AR ads are almost certain to become a major presence on social media. So create one as soon as you can and think about how to integrate it into your social strategy. Being an early adopter will give you a competitive advantage and help ensure more people see your content.

6. Ephemeral content

No one wants to miss something good and perhaps that's the allure of time-limited content. Post ephemeral content and your followers only have say 24 to see it before it's gone forever. The option was first introduced on Snapchat, and now Twitter, Facebook, Instagram and Google have joined them. Give it a try on your favorite social media platform!

7. User-generated content

User-generated content (or UGC) is great for both brands and their followers. For your company, it's basically free content (as long as you have the consent of the creators). And for your followers, it's an opportunity to gain exposure and be featured on your page. When your audience sees that you share user-generated content, they'll be inspired to create some of their own. The result? Increased brand awareness. A win-win!

Today's social media startups are finding unique ways of generating revenue from the very beginning. Here are a few of the revenue models that they're using and how you can apply them to your company.

1. Freemium Model

This business model works by offering a basic service for free, while charging for a premium service with advanced features to paying members.

Examples of the Freemium Model: UserVoice, Flickr, Vimeo, LinkedIn, and PollDaddy

The biggest challenge for businesses using the freemium model is figuring how much to give away for free so that users will still need and want to upgrade to a paying plan. If most users can get by with the basic free plan, they won't have a need to upgrade. For example, I'll probably never upgrade my LinkedIn account and because I don't shoot high definition videos, I'll never need a Premium Vimeo account either.

2. Affiliate Model

This is a model in which a business makes money by driving traffic, leads, or sales to another, affiliated company's website. Businesses that sell a product, meanwhile, rely on affiliated sites to send them the traffic or leads they need to make sales.

Examples of the Affiliate Model: Illuminated Mind, ShoeMoney, DIY Themes

Like businesses that rely on advertising, high traffic sites predictably have a much easier time making money using affiliate links than sites that are just starting out. High traffic means that even low conversion numbers can equal big bucks. However, in just a year since starting his blog, Jonathan Mead from the Illuminated Mind generates enough income from affiliate links that he has been able to leave his full-time job. This is a dream of many bloggers and this is how he did it:

3. Subscription Model

Sites using the subscription model require users to pay a fee (generally monthly or yearly) to access a product or service.

Examples of the Subscription Model: Label 2.0, Scrooge Strategy, Netflix

4. Virtual Goods Model

Users pay for virtual goods, such as weapons, upgrades, points, or gifts, on a website or in a game. Virtual Goods come in all shapes and sizes. Hot or Not was one of the pioneers of virtual good in the online dating industry by allowing users to send virtual roses to other users that cost from \$2 to \$10. The beauty of virtual goods is that margins are high, since goods essentially only cost as much as the bandwidth required to serve them, which is generally almost zero

5. Advertising Model

Sites that rely on advertising, sell advertisements against their traffic. In basic terms: the more traffic you have, the more you can charge for ads (additional demographics about your site's visitors, such as age, gender, location, or interests, also affects the amount you can charge advertisers to place ads on your site).

Examples of the Advertising Model: Yahoo!, MySpace, Tweet Later

1: Identify Your Competitors

Most businesses have already identified the main players in their industry by searching Google or social networks.

If you don't already have a list of competitors at hand, just search for your site on SEMrush to see a list of related providers. SEMrush automatically sorts them by competition level based on how many common keywords the sites rank for in Google.

Once you've identified some potential competitors, the next step is to check out whether they're active on social media. Simply visit their websites and search for social media icons, then visit those profiles. If they're posting actively across social channels, add them to your list of competitors.

For this example, we'll use [Social Media Today](#) and [HubSpot](#) as our target competitors, comparing them to [Social Media Examiner](#)'s social presence.

2: Establish Your Baselines

An inexpensive and powerful tool for social audits is [TrueSocialMetrics](#).

To do a social audit, you'll need to sign up for a small or medium account. A small account will allow you to track your site plus two competitors; with the medium account, you can track your site and up to nine competitors.

Start by adding your own site:

Click on Settings on the top right.

Click on Account.

Create a new account.

Click on Connect Twitter. Here, you'll be asked to authorize app. Log into your own Twitter account and give TrueSocialMetrics access to Twitter's API. Then enter your Twitter profile.

Follow the same steps for Facebook, Google+ and all of the other networks that you'd like to track.

Next, follow the steps on TrueSocialMetrics to create an account and add your competitors.

Create a new account

Account name

BusinessesGrow

Country

United States

Industry

Advertising (Agencies)

Save Cancel

Click on Metric for an overview of the account's social activity for a predetermined time period.

Metric Relative Metrics Custom Segment Feb 01, 2014 - Feb 28, 2014

	Twitter	Facebook Page	Google+	Blog	Connect YouTube	Connect LinkedIn	Connect Tumblr	Connect Instagram	Connect Vine
1. Conversation rate Comments per post	1.39	19.10	3.05	46.05	0.00	0.00	0.00	0.00	0.00
2. Amplification rate Shares per post	9.73	36.20	9.65	5107.25	0.00	0.00	0.00	0.00	0.00
3. Applause rate Favorites per post	7.99	100.41	27.35	737.35	0.00	0.00	0.00	0.00	0.00
4. Economic value Value per dollar	Connect Google Analytics								
#Posts	266	129	37	20	0	0	0	0	0
#Comments	371	2349	113	691	0	0	0	0	0
#Shares	2068	4690	357	102144	0	0	0	0	0
#Favorites	2125	12350	1012	14747	0	0	0	0	0

Here's what each metric means:

Conversation rate —How many conversations does each post generate? This may include comments on Facebook and Google+ and replies to a tweet.

Amplification rate —How often is the content reshared or retweeted?

Applause rate —How many people like each post? On Twitter it's favorites, on Facebook it's likes and on Google+ it's the +1.

The next step is to export all of the charts and aggregate the data into a single spreadsheet. Unfortunately there's no automatic way to do this, so you'll have to enter it manually.

By looking at the data in your spreadsheet, you can use a variety of metrics to evaluate the social media performance of your site and compare it with your competitors'.

Twitter	SME	SMT	Hubspot
posts	266	1904	379
comments	371	2015	650
reshares	2588	18484	5830
favorites	2126	11134	5289
conversation rate	1.39	1.06	1.72
amplification rate	9.73	9.71	15.38
applause rate	7.99	5.85	13.96
Facebook	SME	SMT	Hubspot
posts	123	102	33
comments	2349	197	108
reshares	4699	1566	618
favorites	12350	6296	2574
conversation rate	19.1	1.93	3.27
amplification rate	38.2	15.35	18.73
applause rate	100.41	61.73	78
Google Plus	SME	SMT	Hubspot
posts	37	72	6
comments	113	259	22
reshares	357	336	185
favorites	1012	1007	432
conversation rate	3.05	3.6	3.67
amplification rate	9.65	4.67	30.83
applause rate	27.35	13.99	72

Twitter

In the example above, you can see that although Social Media Today posts four times more often than HubSpot and Social Media Examiner on Twitter, their conversation, amplification and applause rates are lower. When it comes to Twitter, the competitor to watch is HubSpot.

Facebook

On Facebook, the Social Media Examiner page is by far the leader. It has at least 10 times more comments than the other pages, and higher numbers in all aspects.

Google+

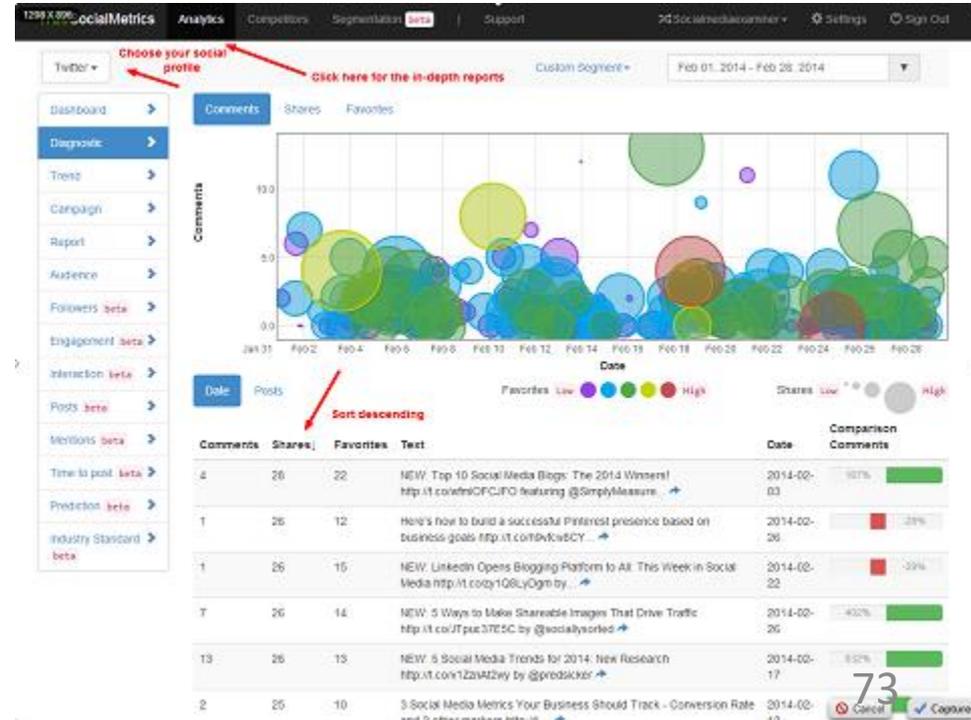
The conversation rate on Google+ is the same across all three competitors, yet HubSpot is vastly superior in terms of amplification and applause rates.

3: Find the Most Successful Content Shared Across Social Profiles

Next, you can do a deep dive into each social profile to identify the most successful content on each one.

- Click on Analytics at the top.
- Select your social profile on the top left.
- Sort descending by comments, shares and favorites.

Look at the data to get a sense of what strikes a chord with followers, resulting in more engagement. Use what you find to inform your content creation strategy for both your blog and social posts.



4: Analyze Audience Engagement

Next, let's look at the audience analysis for each of the social profiles.

Let's start with HubSpot's Google+ profile, since we know it's the most successful. In this report, you can see the most engaged members of HubSpot's Google+ audience.

When creating an engagement strategy for your social profiles, this list can give you some people to add to your Google+ circles. Watch and interact with their content so you can lure them over to your own social profiles.

In addition, keep an eye out for your own most engaged audience members. Remember to thank them and share their content, too.



5: Discover the Most Shared Blog Content

You can also analyze the success of blog content.

From this list, we can see that Social Media Examiner's audience is highly interested in comprehensive research and overall, big-picture trends.

Another interesting finding is that although their niche targets social media, a post about SEO had high engagement, indicating that their audience is interested in both social AND search.

Finally, one of the most popular posts is about social media tools. It has the highest number of favorites.



If you do an ascending sort, you can see which posts had the least amount of shares and engagement. This helps you identify topics that people aren't interested in, as well as guest writers who bring the least amount of engagement.

29 Social Media Tools Recommended by the Pros

By Cindy King
Published February 25, 2014 [Print](#)

Are you looking for ways to enhance your social media marketing?

Do you want new tools to simplify your job?

We asked a group of social media pros for the hottest social media tools they use today.

Check them out to **see if these social media tools are a good fit for you!**

#1: RivalIQ

Figuring out precisely what works in social media is a tricky (yet entirely necessary) proposition.

I'm always seeking to **improve clicks, shares and social media engagement** on my own content as well as our Convince and Convert clients' content.

Recently, I started using **RivalIQ** to **get at what's working in social**, and this easy-to-use, reasonably priced analysis platform produces a steady stream of insights while saving me a ton of time.

Here, I **set up a collection of consumer products companies** (RivalIQ calls them a "landscape") for a strategic plan we're building. With just a click or two, I can **find the top 50 Facebook posts** (by engagement rate or total engagement behaviors) among these companies over the past 7, 14, 30 or 90 days.



Jay Baer



Company Name	Engagement Rate	Top Post
Chickadee	21.5%	27,588
Chickadee	25.8%	28,095
Chickadee	25.8%	28,095

3,797

Tweet

3,797

Tweet

2.1k

Like

Share

884

Share

1.4k

+1

14

857

179

Print

6: Research Competitor Strategy

Don't limit your audit to data gathered from TrueSocialMetrics. Make an in-person visit to all of your competitors' profiles to note the overall strategy behind their social content.

Look into things like ratios of original to curated content, entertainment to industry-specific content and the most shared content.

7: Perform Opportunity and Gap Analysis

After you've analyzed the social profiles of competitors, you can aggregate all of the information into an opportunity and gap analysis report.

Detail what your competitors are doing right and where they're failing, which will reveal your biggest area of opportunity.

Here are a few takeaways to apply from the analysis we ran for this article.

- HubSpot shows a lot of engagement on Twitter, including lots of retweets and conversations. Social Media Examiner could improve its performance on Twitter by increasing audience engagement.
- Share humorous cartoons on Twitter, Google+ and Facebook. Three of the most popular posts across the competing sites are humorous cartoons.
- Write and share more research and case studies on the blog.
- Continue sharing content about SEO across social profiles.

8: Create Your Social Media Marketing Strategy

With the data you've discovered, you're now ready to create your own social marketing strategy!

Now that you know what content is most and least successful across social channels, incorporate this into your content creation strategy. In addition, set target goals based on the benchmarks established by your competitive research.

In Conclusion

When you invest time into a comprehensive social media audit, your findings will provide a strong foundation for your social strategy.

After you put your strategy into motion, remember to regularly audit your site and your competitors' in order to modify your strategy. Use what you learn to further capitalize on what works and improve your own weaknesses.

1- ICT proficiency(Information and Communication Technologies)

The capacity to use ICT-based devices, applications, software and services via their interfaces (mouse, keyboard, touch screen, voice control and other modes of input; screens, microphones, haptic feedback and other modes of output); to use basic productivity software, web browser, and writing/presentation software; to use digital capture devices such as a camera. At higher levels, the capacity: to choose, adapt and personalise ICT applications and systems; to critically assess the benefits/constraints of ICT applications and approaches; to design and implement ICT solutions; to recover from failures; to stay up to date with ICT as it evolves; to adopt computational modes of thinking (coding, algorithms etc).

Digital capabilities: The 6 elements defined

ICT proficiency

The capacity to use ICT-based devices, applications, software and services via their interfaces (mouse, keyboard, touch screen, voice control and other modes of input; screens, microphones, haptic feedback and other modes of output); to use basic productivity software, web browser, and writing/presentation software; to use digital capture devices such as a camera. At higher levels, the capacity: to choose, adapt and personalise ICT applications and systems; to critically assess the benefits/constraints of ICT applications and approaches; to design and implement ICT solutions; to recover from failures; to stay up to date with ICT as it evolves; to adopt computational modes of thinking (coding, algorithms etc).

Information, media and data literacy (critical use)	Information literacy	The capacity to find, evaluate, manage, curate, organise and share digital information, including open content. At higher levels a critical awareness of provenance and credibility. Capacity to interpret information for academic and professional/vocational purposes. Ability to act within the rules of copyright and to use appropriate referencing. Ability to record and preserve information for future access and use.
	Media literacy	The capacity to critically read communications in a range of digital media – text, graphical, video, animation, audio, haptic etc (also 'multimodal literacy'). At higher levels, the capacity to appreciate audience, purpose, accessibility, impact, modality and to understand digital media production as a practice and an industry. To act within digital copyright law.
	Data literacy	The capacity to collate, manage, access and use digital data in spreadsheets and other media; to record and use personal data; to ensure data security and to use legal, ethical and security guidelines in data collection and use. At higher levels the ability to interpret data by running queries, data analyses and reports.

Digital creation, scholarship and innovation <i>(creative production)</i>	Digital creation	<p>The capacity to design and/or create new digital artefacts and materials; digital writing; digital imaging; digital editing of images, video and audio. At higher levels the ability to code and to design apps/applications, games, virtual environments and interfaces.</p>
	Digital research and scholarship	<p>The capacity to collect and analyse research data using digital methods. At higher levels to discover, develop and share new ideas using digital tools; to undertake open scholarship; to design new research questions and programmes around digital issues/methods; to develop new digital tools / processes; to evaluate impacts of digital interventions.</p>
	Digital innovation	<p>The capacity to develop new practices with digital technology in organisational settings and in specialist subject areas (professional, vocational and disciplinary); digital entrepreneurship. At higher levels the ability to lead organisations, departments, teams and practice/subject areas in new directions in response to digital challenges and opportunities.</p>

Digital communication, collaboration and participation (*participating*)

Digital communication

The capacity to communicate effectively in a variety of digital media and digital forums; to communicate in accordance with different cultural, social and communicational norms; to design communications for different purposes and audiences; to respect others in public communications; to maintain privacy in private communications.

Digital collaboration

The capacity to participate in digital teams and working groups; to collaborate effectively using shared digital tools and media; to work towards shared objectives; to produce shared materials; to use shared calendars and task lists and other project management applications; to work effectively across cultural, social and linguistic boundaries.

Digital participation

The capacity to participate in, facilitate and build digital networks; to participate in social and cultural life using digital services and forums; to create positive connections and build contacts; to share and amplify messages across networks; to behave safely and ethically in networking situations.

Digital learning and personal/professional development (learning)

The capacity to identify and participate in digital learning opportunities; to use digital learning resources; to participate in learning/teaching relationships via digital media; to use digital tools (personal or organisational) for learning; to use digital tools to organise, plan and reflect on learning; to record learning events/data and use them for self-analysis, reflection and showcasing of achievement; to undertake self-assessment and participate in other forms of digital assessment; to manage attention and motivation to learn in digital settings.

Digital identity and wellbeing (self-actualising)

Digital identity management

The capacity to develop and project a positive digital identity or identities and to manage digital reputation (personal or organisational) across a range of platforms; to build and maintain digital profiles; to develop a personal style and values for digital participation; to collate and curate personal materials across digital networks.

Digital wellbeing

The capacity to look after personal health, safety, relationships and work-life balance in digital settings; to use personal digital data for positive wellbeing benefits; to use digital media to foster community actions and wellbeing; to act safely and responsibly in digital environments; to manage digital stress, workload and distraction; to act with concern for the human and natural environment when using digital tools; to balance digital with real-world interactions appropriately.

Handling employee during digital transformation

Change is hard in any aspect of life. When it comes to changing how a company functions every day, both leaders and employees are bound to face challenges. However, in the wake of digital transformation, change is necessary. If employees don't keep up, they will be left behind and chances are digital transformation will fail. Leaders/Top Management have a role in leading the digital transformation. It is their responsibility to sell the transformation to employees.

Create a Dialogue -:

No transformation can be successful without communication. Employees tend to be resistant to change when it is forced upon them. With this in mind, it is key to create a dialogue with employees and keep the floor open to discussion. Leaders should actively ask employees what they'd like to see in terms of digital improvements. Several executive members need to be champions of digital change to foster company-wide adaptation. After all, change is a team game. The open dialogue should start from the top and involve every level of employee. Even after the transformation process is underway, executives must keep lines of communication open, constantly asking employees for feedback.

Invest in Training -:

Employees first and foremost need to understand the “why” behind digital change. “Let people understand the reasons for the change, and make sure they have a clear picture of what will improve when they get there. It is critical to implement a thorough training program for employees, to learn about the direct and indirect changes digital transformation will bring. This leads to a mastery of relevant skills and reduces frustrations during times of trouble. All employees, no matter which level they’re at or department they’re from should be required and encouraged to go through the immersive training program to drive adoption.

Allow Experimentation

For many employees, digital transformation involves moving out of the comfort zone. A culture where experimentation is allowed and even encouraged is comforting to those who are new to the digital game. Employees can then freely experiment without fearing the consequences of mistakes. Secondly, employees that can experiment often discover new and faster ways of doing everyday tasks, increasing efficiency and likely productivity.

Encourage Collaboration

Online and offline communication can easily be unified keeping employees connected through their own devices. This truly creates the “anywhere, anytime” access to company documents and tools that has become so commonplace in our daily lives. Further, digital connections often help break down generational gaps and bring employees of different ages together. New digital communication fosters collaboration in departments and across the organization. Ultimately, the digital transformation should feel less like “technology” and more like intuitive ways to complete tasks at hand.

Improve Employee Involvement -:

Embracing digital transformation is more easily achieved through increased employee engagement. With digital advances, employees can reach consumers easily and directly, while most likely staying ahead of the competition. Often, older employees struggle with digital transformations, but their insight and experience are invaluable. By improving internal employee engagement too, employees can feel more valued and fulfilled, making them more open to change.

Ultimately, digital transformation isn't just about technology. The way a company structures itself, encourages and fulfills its employees, invests in training and fosters a workplace culture that is amenable to quick change all play an important role in successful transformation.

Developing company wide strategy

1. Get buy-in

Before you can start building your digital transformation framework, you need buy-in (approval) from the top down. Digital transformation is a big endeavor that affects every part of the business, so you can't implement a strategy without buy-in and alignment from all key players in the company. The leadership is responsible for sharing the company vision with the rest of the organization.

Without a united team, your digital strategy is sunk before it ever left the harbor.

2. Secure funding

Once everyone is on board, you can start crunching numbers. How many funds can you allocate to this initiative?

Keep in mind that digital transformation is not a one-time project. It is an ongoing approach to how you do business and will touch on all parts of the organization (including all departments, employees, and customers).

Your budget will help you structure your ultimate strategy going forward, especially as you identify priorities, allocate resources, and determine scope.

3. Assess your current state

Once you have buy-in and a ballpark budget, you can start laying the groundwork for your strategy. The first step is to assess your current business state. You can't map out where you're going if you don't know where you're starting from.

- A current state analysis will help you:
- Assess the organization's culture.
- Evaluate the workforce's skill set.
- Map out current processes, operations, organizational structure and roles.
- Identify opportunities and pain points that need to be addressed.

One of the biggest mistakes companies make when undergoing a digital transformation is assuming that they can simply migrate their current technology to a new platform or system (like the cloud or AWS) without considering their current processes. Conducting a current state assessment gives you the information you need to make strategic decisions about your digital processes and resources.

4. Identify your goals and desired outcomes

With a clear understanding of where you are now, you can start looking to the future. What are your digital goals? What do you hope to achieve? What experience are you trying to create for your customers and employees?

As you consider these questions, remember to focus on the long game. A digital transformation is about reaching for fundamental, long-term goals. Be bold and ambitious in your vision.

5. Conduct a gap analysis

You know where you are and where you want to be. So now you can identify the gaps and opportunities that exist between those two states.

Consider:

- What areas need to be bridged (e.g., customers, stakeholders, employees, skills, culture)
- What redundancies or inefficiencies exist?
- What resources, processes, or information will you need?

6. Create a digital transformation roadmap

Now that you've outlined your goals and what gaps exist between your business and those objectives, you can create a strategic roadmap to help you achieve your vision.

Map out how you will get from Point A to Point B. This might include reframing infrastructure, re-skilling employees or recruiting new talent, updating your tech stack, and transitioning to a new (more agile) development process. Your roadmap should outline the key goals and priorities, intermediate objectives, a timeline with milestones and benchmarks, and key players and roles for each area of the plan.

Keep in mind that a roadmap should be adaptable and evolve with your business and the changing priorities of the digital landscape.

Digital transformation in the space of cloud computing.

The influx of technologies like Artificial Intelligence, Big Data, IoT(Internet of things) and ML(Machine Language) has rendered traditional businesses redundant. Rapidly changing customer needs force firms to evolve and adapt. Digital transformation is the new paradigm, that helps them stay ahead of the competition. Firms leverage the support of the cloud to set up robust digital transformation frameworks.

Cloud fuels innovation by giving a compatible set of APIs(Application program interface) for developers. Firms can reuse enterprise data. Cloud offers analytics, functional programming, and low code platforms. It is essential for informed decision making. This ensures the faster launch of enterprise-ready products.

Current status of Cloud computing and digital transformation

According to a survey by Logic Monitor, public cloud engagement and adoption is being driven by enterprises pursuing digital transformation. By 2020, a whopping 83% of workloads will be hosted on the cloud. (Source –Forbes) 74% of Tech CFOs believe that cloud computing will have the greatest impact on their business. (Source –Forbes)

89% of enterprises plan to adopt or have already adopted a digital transformation business strategy with Services (95%), Financial Services (93%) and Healthcare (92%) at the top.

In another study, executives considered digital transformation important for survival in the competitive space. (Source –Forbes) Companies are pushing for digital transformation because it enables an enhanced customer experience, faster time to market and greater innovation.

A study by IDG(International Data Group) reveals that 92% of executives consider digital business plans as part of their firm's strategy. 63% of executives are very close to realizing their digital transformation goals.

Here is how the cloud enables digital transformation

1. Agility

A firm has to constantly reinvent its business models. Cloud provides the required infrastructure, platforms and computing abilities that helps firms stay agile and ready for a change.

2. Cost and Labor Effectiveness

Firms don't have to go to the trouble of investing in and managing the required infrastructure. Cloud computing allows firms to scale up or down, so firms only pay for resources that they use.

3. Security

Moving a database to the cloud offers several advantages of increased protection from threats such as data breaches, disasters, and system shutdown. You can create multiple backups. There is reduced risk of system failure, especially where large amounts of data is involved.

4. Faster Prototyping

Companies follow the cycle of innovating, testing, implementing and repeating. Cloud helps in efficient execution of this process without the need for complicated resources and infrastructure. Hence a company can test and deploy different applications on different platforms during experimentation.

Digital transformation involves replacing legacy systems and traditional work practices with processes that support agility. Files can be made available at any place and at any time. Authority and authentication can be determined for each user, this ensures efficient delegation. There is greater productivity due to collaborative work practices.

Digital Transformation in Action

Schneider Electric, a leader in the energy management and automation space, uses EcoStruxure Platform as the IoT backbone. It offers:

- embedded connectivity and intelligence.
- a foundation for smart operations that is interoperable.
- A reliable infrastructure for digital services connected to the cloud.

This platform enables faster at scale delivery of IoT-enabled solutions for smart buildings and data centers. It uses Microsoft's Azure as the cloud framework to offer its digital services and analytics. EcoStruxure closes the gap between IT and OT.

Users are able to utilize the platform to connect equipment and software to the cloud, using IoT technology. Schneider Electric's EcoStruxure simplifies the process of connecting IoT devices, collection, and analysis of data, and using real-time information to improve operations.

Challenges in Implementing Cloud for Digital Transformation

Data Security and Service Quality

Information, when migrated to the cloud, requires additional security measures. The cloud service provider holds the user's security and privacy controls, exposing critical information to attack. Poor quality of cloud services also poses a challenge. A possible solution is to retain control of data and enable real-time analysis via dashboards. Performance, scalability, and availability of cloud services are also important factors to consider.

Performance and Costs

Data-intensive applications often result in higher costs. Bandwidth requirements increase when exhaustive and intricate data is sent over the network. Organizations should move to a metered and dynamic pricing model to keep costs down. Cloud service providers must also provide the option to fix costs for each service.

Migrating and integrating Existing Systems

Migrating legacy systems is a cumbersome task. However, with a sufficient budget and organization-wide support, this can be accomplished. The challenge is to integrate the existing infrastructure with the cloud to ensure maximum efficiency and productivity.

Governance

Governance ensures that information and data are used in accordance with agreed upon policies and procedures. IT governance must also align with overarching business goals and objectives. Cloud-based systems offer only partial control over how infrastructure is provided and operated. Hence the need for stringent governance measures.

A successful digital transformation journey needs to be well thought out before it can be executed. Digital transformation can be an incredibly complex process. With that in mind, here are five key steps companies need to take to prepare for a successful digital transformation journey.

1. Choose the right digital transformation strategies to meet your goals

A massive 96 percent of companies see digital transformation as important or critical to their development. However, businesses should avoid investing in new technology for the sake of it, or because they feel they should. It is essential that businesses identify where technology change is needed most and meet that need.

Businesses should start by assessing their overall business goals and identify what objectives it wants to achieve in the short, medium, and long-term. The next step is assessing what technology will help achieve those goals. For example, it might be that the primary focus is to expand into new markets quickly, in which case it might be sensible to hold off on an investment into AI technology and instead focus on a solid cloud infrastructure that can support mission-critical processes from multiple locations.

2. Invest wisely in technology

Digital transformation means different things to different businesses, and heavy spending alone is not going to guarantee success. The Aberdeen Group has identified three digitalisation technologies that have the potential to impact operations—the Internet of Things (IoT), because of its ability to provide operational intelligence, the cloud, for its scalability, and big data analytics, which can transform data into predictive and actionable insights.

But there's no one size fits all solution. According to research, 19 percent of manufacturers are planning to invest in inventory management, 18 percent in cloud, big data and customer relationship management, and 17 percent are planning a mobile technology implementation.

There are multiple options, and businesses must ensure that they are investing in the technologies that are right for them. While one company may see immediate benefits from implementing cloud infrastructure, a manufacturer operating out of just one facility might want to look at other options first. For example, a firm instead see more immediate ROI from keeping data on-premises, but implementing an ERP solution that uses big data to track orders against stock and supply chain information in real-time. However, if a company chooses right, its ERP strategy should be flexible enough to accommodate growth and an eventual move into the cloud.

3. Convince your stakeholders

After identifying how digital transformation can support business goals, now is the time to bring stakeholders on board—because successful digital transformation strategies change how businesses work. They impact people’s jobs, how they complete tasks, and also how they work together.

Unfortunately, for many businesses, engaging with stakeholders is easier said than done. According to a recent study, 51 percent of UK IT leaders struggle to get executive sign-off on their transformation strategies.

However, staff from the boardroom and beyond need to feel they have a personal and professional stake in the changes being made. Helping them understand the reason for the business’s investment will make it easier to overcome any potential resistance to new processes. This is particularly important when digital technologies are being implemented to automate tasks that are otherwise completed by staff members, or when it might not be immediately obvious how an investment will deliver ROI.

4. Use data to enhance business decision-making

Businesses today are collecting more data than ever, but simply amassing vast amounts of information as a result of digital transformation is not enough. The key lies in being able to use insights effectively, to guide change or identify new revenue streams.

The latest data analytics suites can provide businesses with crucial information about customer trends and predictions, or information about how products are performing. Some businesses are already using this sort of data, to turn insights into action.

For example, UK manufacturer of fasteners and latches, Southco, has optimised the assembly line in its smart factory in Worcester. Intelligence from the Epicor Mattec MES system demonstrated the business was only benefiting from 20 percent utilisation of its static assembly lines. Many products were previously only assembled on their own 'exclusive' assembly benches. However, once it was highlighted that in some cases a bench would only be used for eight hours a month, Southco deployed semi-automated plug and play assembly machines which are now used for multi-assembly tasks. This has pushed average bench utilisation up to 60 percent.

5. Constantly re-evaluate your digital transformation strategy

Companies must understand that digital transformation is a journey that is never complete. New technologies are being launched all the time—from robots that complete tasks on the production line quicker than humans, to machines that can fix equipment problems without intervention. All of these bring with them multiple possibilities for UK manufacturers.

As Charles Darwin once said, *“It is not the strongest or the most intelligent who will survive but those who can best manage change”*. This applies to more than just the natural world. It is just as true for manufacturers in the current UK economy.

It’s important for businesses to constantly adapt their digital transformation strategy to new possibilities, reassess their journey, and question the rate of digital change—does it match up to customer expectations? How does it stack up against business goals? If these change, perhaps the businesses’ technology should too.

Advertisement

Industry 4.0 technologies, as well as enterprise resource planning (ERP) solutions, are helping to streamline supply chains, automate production lines and equip manufacturers with the intelligent data they need to react to today’s consumer demands. If UK business are to continue challenging the world’s production leaders, they must invest in advanced technologies. Ultimately, these will help them to drive manufacturing efficiencies and get set for growth.

THANK YOU