









European Utilities 2014 Top 10 Predictions: Getting the Most Out of the New Normal

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Spring Cocktail – March 27, 2014





IDC Energy Insights



IDC Predictions 2014

- A global provider of research-based advisory and consulting services focused on market and technology developments impacting the global energy (utilities and oil & gas) industry.
- Part of IDC the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications, and consumer technology markets.
- Research led by a global team of 10 full-time analysts with deep energy industry experience, and supported by nearly 1,100 IDC analysts located in over 110 countries.
- Serving **clients** that include utilities, oil & gas companies, technology vendors, government agencies, and investors.











Utilities Dealing with "the New Normal"



Source: The Economist



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Energy Industry is in the Midst of Transformation



Europe has 510 million consumers part of liberalised supply & retail markets; US has 110 million, Asia 20 million

In a turnaround unthinkable a few years ago, the US is becoming the world's top oil and gas producer (2015)

Renewables from a minor phenomenon to a large majority, accounting for 70% of new capacity addition

More than 3 million
Europeans now generate
their own electricity

Bio-Villages or community led energy initiatives are rising in Europe in addition to more comprehensive smart city initiatives

Innovation could reduce power generation cost by 11%

R&D expenditure by large European utilities has nearly doubled over the last decade to over €1.7 billion

Water access remain a priority, along with the need to invest in new and aging infrastructure

Africa represents only 3% of global electrical consumption, but by 2020 electrical consumption will have increased by 60%



Source: Eurelectric, IEA WEO 2013, IDC Energy Insights



Utilities are Under Performance Pressures



GDP forecasts

The current rate of investment is unlikely to be sufficient to achieve the desired targets

More choice and flexibility for consumers, but retail market concentration remains high, with low switching rates for residential customers (6% average, max. 14%)

Across Europe energy consumption is not growing

E.ON, Germany's biggest utility, said 1Q core earnings fell 5%, blaming weak energy consumption and low electricity prices in its main market Europe

"Intrusive and uncoordinated national interventions make the industry un-investable"

Enel produced 12% less electricity at its Italian plants in 1Q, outpacing a decline in national power demand and likely reducing its demand for emission permits



Source: Reuters, Eurelectric, IDC Energy Insights



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The 3rd Platform is Reshaping the Technology and Business Landscape





The 3rd Platform creates the underpinnings for business process transformation...and increasingly, business model transformation.

Businesses will be able to transform:

- How they innovate
- Their resiliency
- The reliability of their operations
- How they engage with customers
- The speed at which they deliver their products and services

With such high stakes, the business is increasingly driving technology initiatives!

Inversion of business from make-sell to sense-and-respond







Top 10 Predictions 2014









A Selection of Utilities Industry 2014 Predictions



- 1. Utilities will hunt for **flexibility** and **innovation** in their **operations** and **business models**.
- 2. At high impact, **microgrids** will force business model change; at minimum, service opportunities will require IT and distribution adaptation.
- CIOs will devote more time and attention to working closely with line of business on cyber security, enlarging their scope of action.
- Driven by IT and operational technologies convergence, the role of utility CIOs will transform.
- Eroding utility revenues and the increase in capital and operating costs will force utilities to develop analytics strategies.
- 6. Adaptive utilities will embrace dynamic resilience to survive ecosystem changes.
- 7. Utilities will need to seek new paths for data management to boost smart grid innovation.
- Utilities' multichannel customer management will call for platform and architecture investment.
- 9. Gamification will gain traction in utilities to create consumer engagement, loyalty, and trust.
- 10. European utilities' **IT spending** will surpass \$16.2 billion in 2014.



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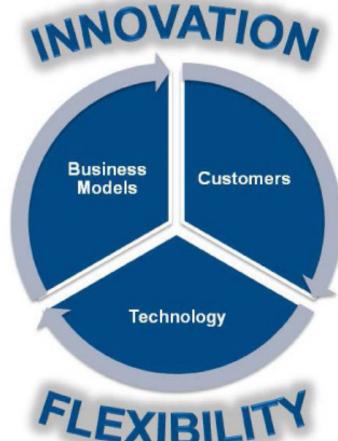


#1 Utilities will Hunt for Flexibility and Innovation in their Operations and Business Models



Drivers

- Distributed generation and changes in the generation mix
- Overcapacity in some regions
- Financial pressures and deteriorating margins for centralized generation
- Technology development and "Internet of Things"



Source: IDC Energy Insights, 2013

Details









Disruptive energy technologies (solar, distributed generation, solid-state lighting, grid batteries, vehicle-2-grid, compressor-less air conditioning, etc.) will continue to impact the power sector.

- Decentralized generation and community-led energy initiatives will continue to shift the power from incumbent utilities to "Prosumers".
- The virtual power plant, already a commercial offering, will become more demand-oriented, enabling new customer engagement models and commercial arrangements.
- Utilities will continue to strive towards customer-centricity.
- Business flexibility will impact legacy IT systems and will call for more agile IT capabilities.



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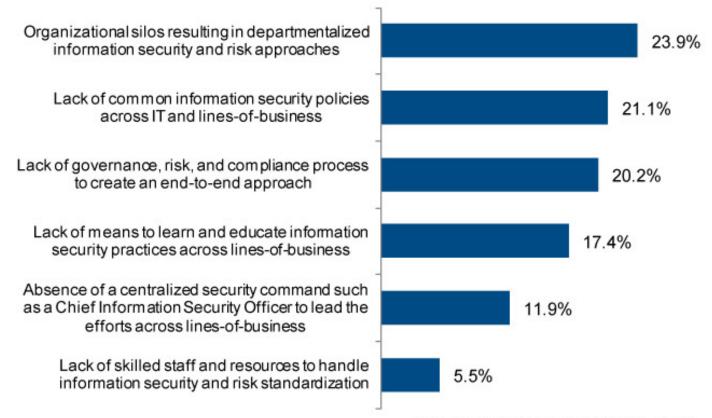
#3 CIOs will Devote more Time and Attention to Working Closely with Line of Business on Cyber Security, **Enlarging their Scope of Action**



Drivers

- Smart grid cyber security is one of the top smart solutions in which utilities will invest in the next two years
- Increasing cyber attacks by hacktivists and foreign actors
- Reports of viruses moving from control systems to corporate networks and software that sniffs controllers

Top Barriers to Achieve a Comprehensive Information Security and Risk Strategy



Source: IDC Energy Insights, 2013

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Concerns about process control will mean IT must work more closely with operations (transmission, distribution, power generation, water treatment, etc.) and operational technology vendors to protect assets.

- As IT becomes easier for the line of business to purchase services via the cloud or write their own web applications, IT risks becoming disintermediated and security may be threatened.
- Utilities believe that application monitoring, risk modeling and detection and Big Data and analytics can help to enhance risk management, metrics collection, and maturity measurement activities.
- "IT is no longer back office it's now a critical operational partner to the business" (utility engineer for grid modernization).



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Driven by IT and Operational Technologies Convergence, the Role of Utility CIOs will Transform



Drivers

- Digitalization and Internet of Things
- Disruptions in information and operational technologies
- Business increasingly IT savvy
- Pressure on improving business effectiveness and customer satisfaction



Source: IDC 2013

Details





- More than 65% of new IT initiatives will have a direct involvement from business executives. Moreover, IT investments will be treated in the same way as any other company investment.
- A new kind of "shadow IT" is expected to considerably increase. IT components will be part of the budget of specific business projects, especially where operational technologies are involved.
- CIOs will need to enlarge their role, shifting their primary focus from IT operations and business service to business innovation and flexibility.
- CIOs will consider alternative options for IT sourcing ("cloud first" strategy, managed services, etc.) and will evaluate how to leverage at least one dimension of the 3rd Platform better (i.e., mobile apps, Big Data/ analytics, social networking).
- The 3rd Platform will change the skills for 90% of IT roles over the next 3-5 years. CIOs will have to find creative solution for a wide range of IT talent issues.





#9 Gamification will Gain Traction in Utilities to Create Consumer Engagement, Loyalty and Trust



Drivers

- Adoption of gaming in enterprise business
- Smart metering implementation and pressures to make data accessible and available to customers
- Efficiency targets
- Customer satisfaction
- Competitive energy market



Details









- Across industries, social technology-based customer communities will become a standard and strategic component of virtually all customer engagement and marketing strategies.
- A number of utility companies have started experimenting with gamification, usually with the support of third-party vendors, resulting in a new and flourishing start-up sector that sits between a utility and its customers.
- An increasing variety of vendors are bringing gamification technologies onto the market that integrate with social platforms and enterprise applications.
- Utilities' maturity level in customer engagement will steadily evolve.



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Recommendations

IDC Predictions 2014

Battles for Dominance

- and Survival - on the

3rd Platform

- Embrace the "New Normal" and leverage digital technologies to drive business innovation and agility
- Leverage cybersecurity as an opportunity to overcome organizational silos
- Develop a comprehensive service portfolio to ensure that everything that IT does is positioned to support business value
- Develop an IT skills plan to support the future enterprise needs









Thank you! Enjoy the Cocktail ...

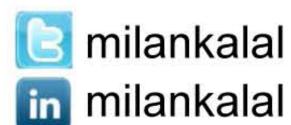


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Appendix

About IDC



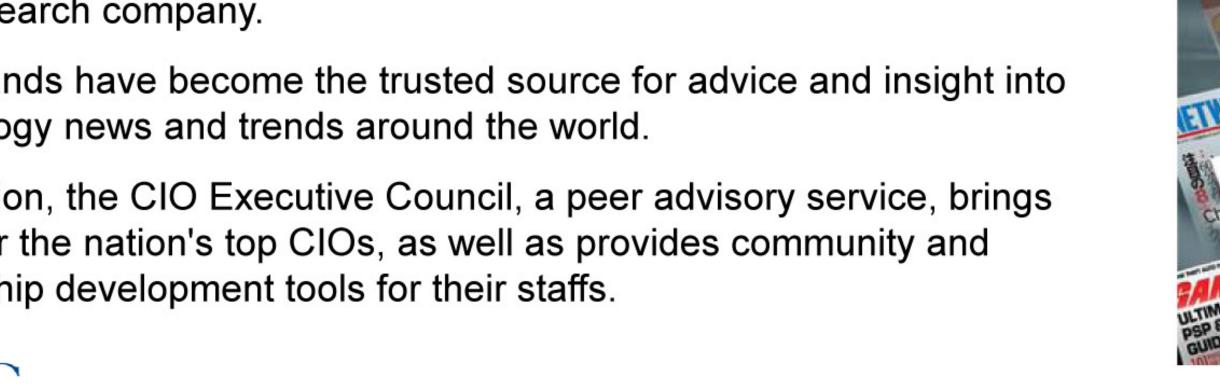




IDC Overview



- IDC is the premier global provider of IT market intelligence and advisory services. We help clients maximize the impact of their technology investments on the business.
- For 50 years our 1,100 analysts worldwide have been assisting businesses and governments by providing global, regional, and local expertise on technology related issues in over 110 countries.
- Our multilingual, multicultural workforce surveys over 300,000 technology users and decision makers annually, delivering unrivaled coverage.
- IDC is a subsidiary of IDG, the world's leading technology media, events and research company.
- IDG brands have become the trusted source for advice and insight into technology news and trends around the world.
- In addition, the CIO Executive Council, a peer advisory service, brings together the nation's top CIOs, as well as provides community and leadership development tools for their staffs.











IDC's Research Assets are Distributed Around the World



1,100 Research Analysts Located All Over The World







IDC's Core Value Proposition





- 50 years of experience in the technology market intelligence business
- Largest global network of expert analysts
- Unique vertical industry focus and research
- Rigorous research methodology standards
- Unparalleled market and technology segmentation
- Fact-based analyst insights and actionable advice
- Strong customer relationship focus

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IDC's Insights Research on Line of Business Issues



IDC Insights research practices assist business and IT leaders in making more effective technology decisions by providing insightful fact-based research and consulting services.

Our global research and analysis is focused on mitigating technology risks and maximising the effectiveness of IT investments.



- Smart utilities customer operations
- Smart grids / Smart energy
- Utilities IT & operational technologies
- Oil and gas smart exploration



- Smart government services
- Smart cities
- Public safety
- Government infrastructure modernisation



- Connected health
- Electronic medical records (EMRs)
- Accountable care
- Personalised medicine
- Life sciences supply chain



- Supply chain optimisation
- Connected vehicle
- Smart services
- Next-generation product life-cycle management
- Operations technology



- Risk management
- Customer experience management
- Mobile payments
- Bank infrastructure modernization



- Customer experience
- Retail sourcing optimisation
- Merchandising and marketing analytics
- Retail infrastructure modernisation



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IDC's IT Executive Programme



Why IDC's IT Executive Programme?

IDC's IT Executive Programme consists of a family of research programmes intended to help today's time-constrained IT executives make more effective technology decisions.

The programme offers accurate and timely factbased research and programmes that will assist IT executives in mitigating technology risks, maximising the effectiveness of IT investments, identifying and capitalising on new opportunities, and bringing forth solutions that are aligned with the organisation's business objectives.

IDC's IT Executive Programme offers you:

- Flexible options for a programme that is right for you
- Easy analyst access
- A CIO Advisor
- Peer group support through the CIO Executive Council









IDC's CIO Agenda Practice



Why IDC's CIO Agenda?

IDC's CIO Agenda research programme recognises that an IT executive's time is better spent engaging the business around IT than managing day-to-day IT operations.

The CIO Agenda supports IT executives in creating a business-based IT organisation by providing strategies, best practices, frameworks, and advice around the most important issues on a CIO's agenda:

- Emerging IT strategies
- Case studies on IT transformation
- Peer benchmarking on best practices
- IT performance metrics
- IT spending surveys

CIO Strategic Issues

Working with the business

Innovation strategies

Maximising IT's performance

Business Driven IT Initiatives

Replatforming around the cloud

Deriving business value through information

Planning for end user devices of the future

Incorporating social into workplace collaboration

IT Operational Initiatives

App/dev architecture and strategies

Data mgmt,

governance &

information security

IT enterprise architecture

IT staffing &

organisational

strategies

IT sourcing & procurement strategies

Governance, risk &

compliance

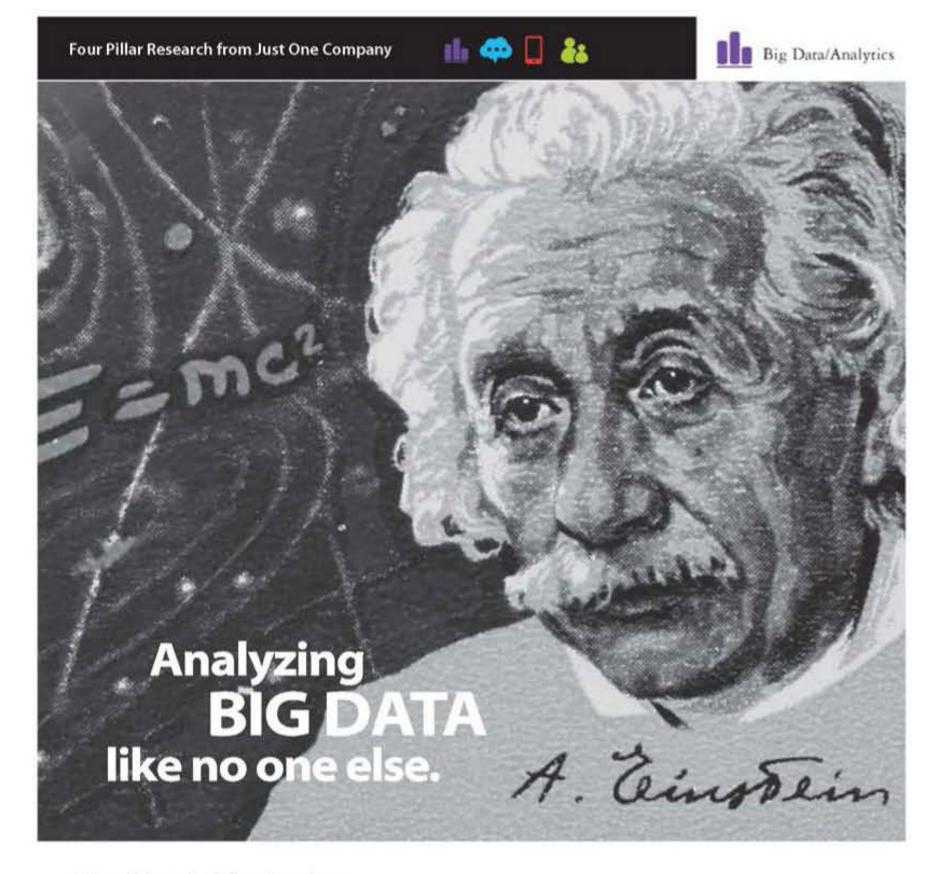
framework

Service mgmt strategies

IT financial mgmt strategies







Albert Einstein did and so do we.

Our global research team covering big data and analytics advises organizations around the world on how they can move toward more data-driven decision making through an effective big data and analytics strategy. We can help you address some of the most pressing business and technology decisions by helping you:

- Assess your current big data and analytics competency and maturity
- Benchmark your big data and analytics strategy against your peers'
- Evaluate big data and analytics technology
- Short-list your big data and analytics suppliers



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Battles for Dominance

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3rd Platform





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Our global research team covering cloud advises organizations around the world on how they can develop a service delivery IT organization through an effective cloud strategy. We can help you address some of the most pressing business and technology decisions by helping you:

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- Benchmark your cloud strategy against your peers'
- Evaluate cloud rechnology
- · Short-list your cloud suppliers



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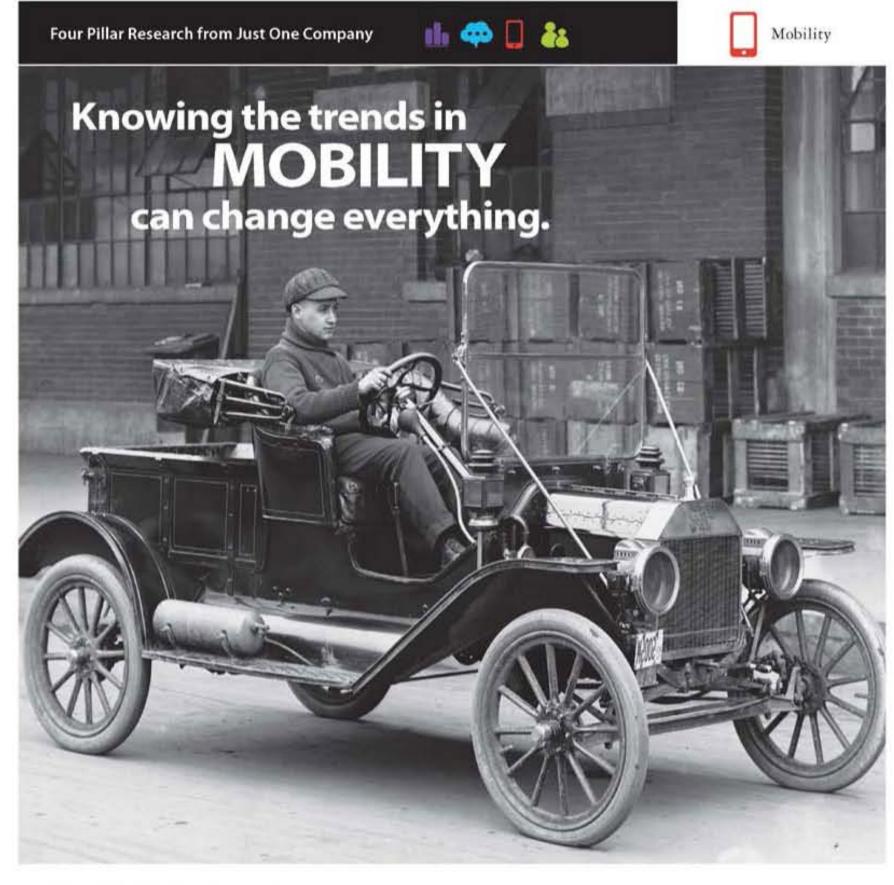
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Our global research team covering mobility advises organizations around the world on how they can expand their reach through an effective mobile strategy. We can help you address some of the most pressing business and technology decisions by helping you:

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- Benchmark your mobile strategy against your peers'
- Evaluate mobile technology
- Short-list your mobile suppliers



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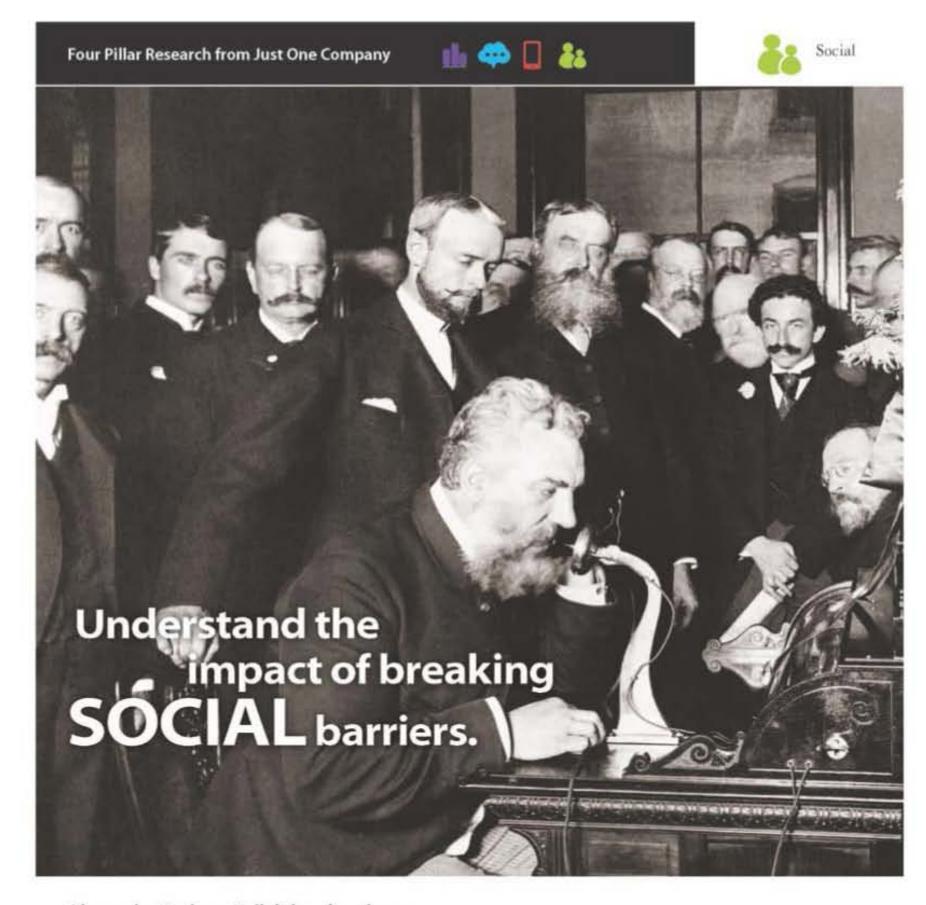
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- · Benchmark your social strategy against your peers'
- Evaluate social technology
- Short-list your social suppliers



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