



*What will the software industry look like in 3, 5, even 10 years from now?*

Over the next five years, the computer industry will be shaped by the current nexus of megatrends: Cloud Computing, Social Computing and Mobile Computing. As a consequence, these trends are elevating data integration as one of the most strategic technologies.

1) Cloud Computing is driven by the compelling value proposition: lower cost and better results. However, the platform shift to cloud computing is driving the next wave of data fragmentation, across enterprise boundaries.

2) Social Computing allows organizations to go beyond traditional business management: holistic brand management including proactive customer engagement and timely consumer sentiment analysis. The new era of social computing is fueling an unprecedented explosive growth of data.

3) Mobile Computing is making pervasive computing and connectivity a reality. The new mobile

devices are raising the importance of both integrating geospatial data for location-based services and enabling near-universal data access from any device.

I will elaborate on the first two megatrends: Cloud Computing and Social Computing.

Cloud Computing vendors deliver the same resources to thousands of customers. Their economies of scale mean better economics for customers. Their specialization means best-in-class results. There are now three specialized categories of Cloud Computing vendors. Infrastructure-as-a-Service vendors, like Amazon EC2, that offer hardware to rent. Platform-as-a-Service vendors, like Google Apps, that allow developers to productively build new cloud applications. And, Application-as-a-Service, or Software-as-a-Service vendors, like salesforce.com, that provide a wealth of applications in the cloud.

Despite the impressive growth, Cloud Computing will not replace on-premise enterprise computing, just like client-server computing did not replace mainframes. No one can afford to simply rip out the old computers and replace the old with the new. However, with each new computing platform, all the innovation shifts to the new platform. Few can afford to be left behind. One of the key challenges is to support the hybrid platform, giving the flexibility to integrate data from both old on-premise and the new cloud platforms.

In the new era of Social Computing, the focus is shifting from managing business transactions to managing interactions. The relational database is the foundational technology for capturing business transactions and analyzing this data. Relational database applications have improved productivity for business management. Now, the latest social data allows organizations to do more for holistic brand management including proactive customer engagement and timely consumer sentiment analysis. For brand management, the data is about interactions. Organizations can be proactive with current social data, rather than being simply reactive with past relational data. The recent explosive growth of data, led by social data, is unprecedented. The technology trend called Big Data will require big changes in the technology stack.

Over the past 40 years, the relational technology stack has been optimized for managing structured transaction data. A new stack is now available for managing large volumes of data, including interaction social data. This new stack is called Hadoop. And, for the large volumes of social data, only parallel processing of Hadoop delivers acceptable performance. To fully realize the benefits of social media, the challenge is to integrate the two worlds - relational transactions and social interactions.

The growing adoption of the three new platforms - Cloud Computing, Social Computing and Mobile Computing - will elevate the strategic role of a comprehensive data integration platform to leverage the wealth of information assets.

*And what customer demands and business trends will drive changes?*

Enterprises across a broad spectrum of industries aspire to become data-centric enterprises. The extraordinary experiences of the Great Recession and the recovery have underscored that data matters even more in uncertain times of change. Simply put, no one can predict the future but we can all be better prepared with relevant, trustworthy and timely data. The five defining business trends include:

1. Accelerating globalization: opportunities and competition are across national boundaries.
2. Continued industry consolidation: pace of acquisitions is picking up, across many industries, with the next wave of consolidation.
3. Renewed focus on growth: new wave of customer-centricity initiatives including mobile and social commerce.
4. Operational efficiency: applying the lessons of the Great Recession.
5. Increased focus on risk management and compliance: new and changing regulatory regimes.

These trends are shaping the top business imperatives. Globalization mandates modernization to be competitive. Industry consolidation requires successful post-merger integration. Growth demands customer-centricity and agility. Operational efficiency demands business process optimization including outsourcing. Governance requires an enterprise risk and compliance initiative.

All these business imperatives demand that IT deliver the critical data. IT often cannot deliver this data as it is locked up in multiple systems, on-premise and in the Cloud. Without a doubt, data is the difference between success and failure of these business imperatives. No wonder organizations across vertical industry segments and around the world aspire to become data-centric enterprises. Data integration has a higher sense of purpose, priority and urgency than ever before. Our singular focus at Informatica is to empower the data-centric enterprise.

*This interview was published in SIIA's [Vision from the Top](#) , a Software Division publication released at [All About the Cloud](#) 2011.*