



In-Memory Technologies

Situation – Market dynamics

Many companies and industries are struggling with change: New developments in technology, new requirements and regulations, shifting client perceptions – it is hard to recognize, correctly estimate and react to these dynamics. Senior executives know that they cannot control the external industry environment, but they know that they can anticipate the change by understanding, managing and reacting to the forces causing that change.

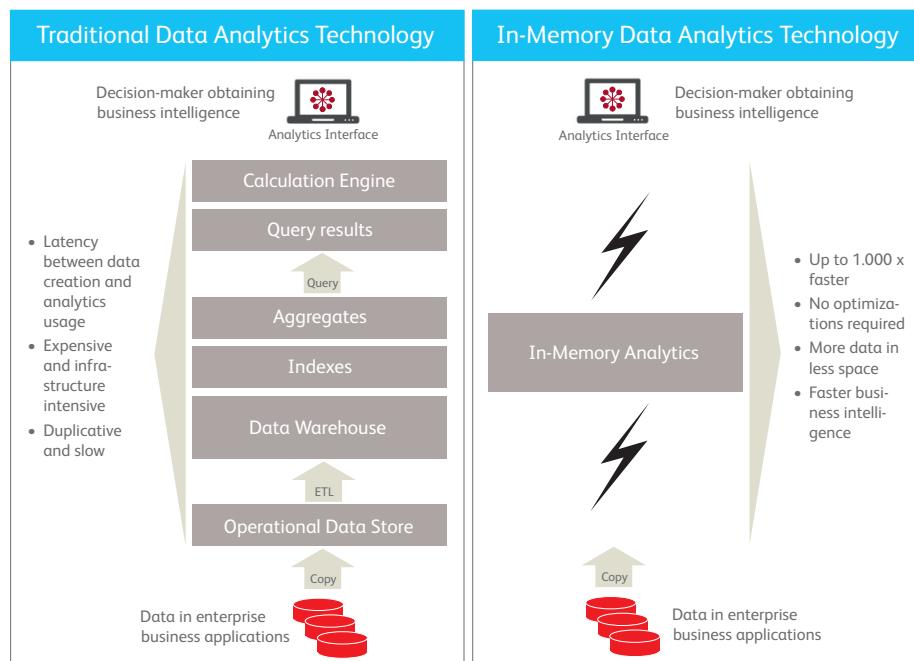
Those changes are challenging the reporting and DWH/BI environment, because they often require massive and complex changes in the data structures and processes behind the analytics layer. Data in large volumes, high velocities and many varieties are an additional challenge, being responsible for poor performance levels of enterprise applications and enterprise-level DWH/BI.

New In-Memory database concepts allow overcoming those challenges, making full benefit of the availability of In-Memory hardware resources for less money. This future-proof approach will cut costs, increase productivity, and lead to better and more responsive analytics. Investing into In-Memory Database products will drive new opportunities and business models.

Anticipating change and taking the right actions is vital for building competitive advantages.

Challenges

In most cases, In-Memory databases are “misused” as disk cache, where database structures and data is loaded into memory. The performance gains are therefore limited to the pre-fetching effect, since the data structure complexity is application-driven and not DWH/BI aware.



When used correctly, In-Memory databases allow for radical design changes: No separate DWH, no ETL process, no need for additional disk space, and no delay between production data and BI. The In-Memory database may only contain requested aggregations, organized and cached in a smart way that allows for later re-use, autonomously loaded from the transactional database.

Key Questions

Looking at the market trends and challenges, the following key questions arise:

- How can I accelerate reporting cycles, provide better analytics, increase data quality and integrity, decrease redundancy and complexity, and optimize reconciliation systems?
- How can I verify that all relevant business rules are captured (for data provision, data management, and analytics), and at the same time keep the administration cost low?
- Do I have a business case for leading-edge analytics using In-Memory technology?

Our Point of View

We see that the first wave of purely vendor and technology-refresh driven initiatives for the implementation of In-Memory technologies did not really address the business potential and in many cases did not even pass the proof-of-concept phases successfully. There are several corporations that went a step further and are on their way to mine the full potential.

Transforming the traditional database approach into an In-Memory approach requires a high level of effort. Some companies underestimate that effort and believe that it is seamless and easy to manage. In some very rare instances this might be true. But the more generalized the usage of In-Memory technology becomes, the more integration effort and investment in implementation, operations and maintenance is necessary.

But what level of investment is needed? What did others do well, what went wrong? Does it really make sense to make huge investments in a completely new In-Memory platform, or is it better to use incremental steps as a starting point? Can a similar functionality be reached using different technologies? Several key prerequisites and requirements need to be carefully analyzed and evaluated in this decision process.

How BearingPoint can help

BearingPoint has a long-standing project expertise and a sound knowledge of the technological developments and trends. With our well-established toolkit, we can assess the business case and organization maturity for the new In-Memory technologies. This secures the organizational fit of the new solution into existing and future landscapes.

This makes us an informed, trusted and reliable advisor, providing clear guidance on architectural prerequisites, timing questions and other specific target actions you need to take to define a clear change roadmap.

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About BearingPoint

BearingPoint consultants understand that the world of business changes constantly and that the resulting complexities demand intelligent and adaptive solutions. Our clients, whether in commercial or financial industries or in government, experience real results when they work with us. We combine industry, operational and technology skills with relevant proprietary and other assets in order to tailor solutions for each client's individual challenges. This adaptive approach is at the heart of our culture and has led to long-standing relationships with many of the world's leading companies and organizations. Our 3350 people, together with our global consulting network serve clients in more than 70 countries and engage with them for measurable results and long-lasting success.

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