ERP 'Big data'
Competitive Analytics
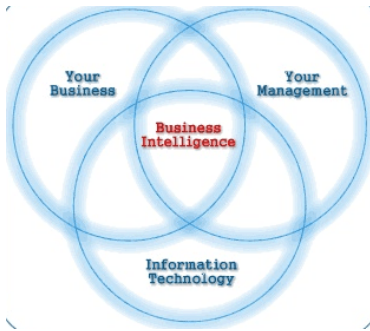## Teradata, HANA, Exadata or Exalytics

Competitive Analysis - for BI Performance Seekers

BI Valuenomics paper

By Hari Guleria

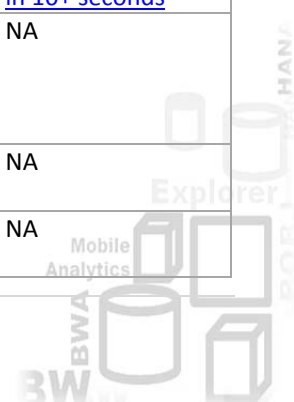*Perspective as of: Feb 20, version 2*

Finding instant answers to critical analytics is the quest of the day – at least for the mega BI Vendors. The first in this group is Teradata with its mature technology but facing two large vendors trying to edge into their domain of high performance. The second is Oracle with more than one bad marriage on the horizon, i.e. HP it's core partner squeezed out by Sun Microsystems for Exadata partnering, and SAP as Oracles largest database partner now coming up with the HANA alternative which is the third and most recent addition in the performance game. In addition SAP also plans to soon release their Sybase ASE database that will lower both cost and user licensing for native SAP environments. It will also serve as an excellent backup for HANA data when it is not required for instant analytics. An example may be a customer that has approved the HANA acquisitions but now has to wait for SAP and Oracle to work out their Oracle Runtime license issues..', all this will possibly 'magically disappear' as SAP certifies Exadata for SAP Applications.

So here is a current assessment of: General (**G**); Business (**B**) and Technology (**T**) drivers and decision points for the three technologies under review:

	Attribute	Teradata	HANA	Exadata	Exalytics
G	**Solution Owner**	**Teradata**	**SAP**	**Oracle**	**Oracle**
G	**Type**	DW	Appliance	Appliance	Appliance
G	**What it basically is**	Data Warehouse	Application Platform **+** In-Memory Database	New Database	*An accelerator for Exadata analytics*
B	**Elevator Statement**	High Performance Reporting	Extremely high performance in 'True Real-Real Time'	High Performance Reporting	High Performance Reporting
B	**Primary Driver**	Performance	Performance	Performance	Performance
B	**Replaces**	Slow DW's	Slow DW's	Slow DW's	Slow DW's
B	**Weaknesses**	Still on Old technology	Cannot yet run Complex Analytics	Cannot yet run Complex Analytics	NA
B	**How it Works**	Parallel Processing	In Memory appliance	Cell based appliance	In-Memory
B	**What this enables**	Faster Analytics	True Real-Real time Analytics	Faster Analytics	Faster Exadata
B	**What it is**	High performance engines	In Memory columnar and row based database options.	Mix of conventional disc drives, flash cache and RAM memory	Launch of Oracles In-Memory
B	**What does it support**	Separate Analytical database	Analytical and transactional workloads on same database	Separate Analytical Database	Separate / Bolton In-Memory application
B	**Business Case Performance**	1 billion records in 1 to 5 minutes	40 billion records in 3 to 10 seconds	Broker Commission Payments down from 37hrs to 9 hrs	100 million in 1 second, so 1 billion in 10+ seconds
B	**User base as of July 2011 and projected**	Mature Many customers	In POC and vision stage, went live on June 20th '11. Few customers under 100	Over 1000 clusters by 07/11, 3000 by 1/12	NA
B	**Pipeline by Dec 2011**	NA	$1 billion (Bill McDermott)	$ 2 billion (Larry Ellison)	NA
B	**When will it change the market**	Mature Under dual pressure	3-5 years High potential impact	2-3 years Under pressure	NA

B	Challenging	NA	Teradata & Exadata prospects	Teradata prospects	Complementing slow Exadaa
B	Alternative technology	NA	Sybase ASE (low cost)	Oracle standard db	Exadata
B	Ready to Run Content This makes it closer to an appliance	NA	Yes as of July 2 available 1. SWP (HR) 2. SMA (Raptor) for Utilities 3. CO-PA SAP announced to have 12 by Dec 2011	NA	NA
B	What is the future	Same	Next Generation consolidated database platform for SAP customers	Standard next version database platform for Oracle customers	NA
T	**Performance Benchmark**	**1 billion records in 1-5 minutes**	**40 billion records in <10 seconds**	**900,000 records in < 10 minutes**	**100 mill records in 1 second, 1 bill in 10**
T	Seamless Integration to Oracle	Coding required	Seamless	Seamless	To Exadata and Oracle db's
T	Seamless Integration to SAP	Coding required	Seamless	Coding required	Coding required
T	Can be used for BW	Coding required	Yes	Coding required	Coding required
T	Seamless Integration to 3rd Party	Coding required	Coding required	Coding required	Coding required
T	Comprehend 'Buried/native SAP intelligence'	No	Yes	No	No
T	How it works	Massively parallel processing	In Memory processing	Cell + server based processing	Cell+ Server + In-Memory processing
T	How each solution works	SQL coding, dependent on coders skills and experience	Automatically compute answers in main In-Memory & Columnar database	Compute with Cell node that chunks questions & storage servers crunch answers	Add In-Memory for Exadata
T	Data Compression	NA	8x	4x	10x
T	Customer Performance Improvement	60 to 500 times faster	100 to 3000 times faster	3 to 30 times faster	NA (too New)
T	Technology Maturity	Mature	New	Semi-New	Brand New
T	Launch Month/Year		June, 2011		Oct, 2011
T	Near Future trend 1	Massively parallel DW solution	Real-time access to ECC Data	New: Oracle 11g is not a dramatic shift	Accelerator for Exadata
T	Is it truly an appliance	No	Not yet	No	No
T	Certified HW providers	Teradata	HP, IBM, Fujitsu, Dell, Cisco	Sun Microsystems	Sun Microsystems

Performance has become a mandatory business catalyst for global analytics and the backbone for Mobile Analytics, i.e. taking analytics on to mobile devices like iPad, Android devices and blackberry. For example banks in New York want to be closer to the Network Carrier Hotel (hub) which is the largest carrier-neutral interconnectivity hub (60 Hudson Street). By this move Banks gain micro-second advantage that is now perceived as an advantage that can be passed to the banks customers. If one bank makes a global trade 0.34 seconds earlier than its competition they then have the competitive advantage to win the larger race. Their customers get better trade information few seconds before others, and a few hours before the rest of the world.. Similarly performance is critical for deploying faster alerts, out of stock warnings and other business critical analytics that make a strategic difference between life and death of corporations. Outperform competition is only key to strategic survival.
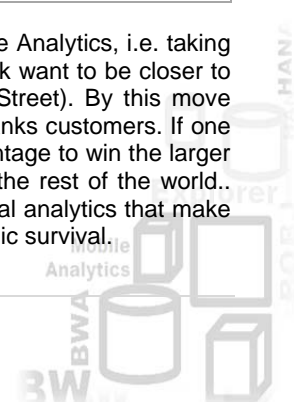
Hari Guleria works with HCL AXON in the position of BI Solution Architect/Manager in the US. Prior to this he worked with SAP America in their Value Realization division and prior to that with premier SAP Channel partners including Anderson consulting. He has over nine years of Sr. management experience with European multinationals – due to which he consistently maintains a high 'Business Value Attainment' focus where technology becomes a delivery catalyst and not an end by itself. Hari has over 26,000 hrs of BI implementation experience with Oracle DW, BW, BW Accelerator, BusinessObjects, Accelerated Explorer, Teradata and HANA. He is the author of 'BI Valuenomics- The story of meeting business expectations in BI', and BI Valuenomics–CxO. He is currently working on 'BI Valuenomics for SAP BI'. The content expressed herein is independent of HCL AXON and does not express the views, opinions or recommendations of HCL AXON. These are independent thoughts of the author and provided without any warranties or ownership or any form of liabilities whatsoever as to its content or consequences. The content may change without any notice whatsoever. Contact at hguleria@bidatabridge.com or on LinkedIn