

Top 20 Tips for OLAP Success

Summary: Here's a quick checklist that can help you avoid many of the common errors in OLAP implementations.

Here are 20 quick tips, some obvious, but others counterintuitive, which are all based on real-world experience and research data.

Top Tips

1. Avoid grandiose big bang "enterprise BI."

Keep projects small and simple, focused on a quick payback. Don't worry if they need replacing in three or four years. Too many things in the business, personnel and technical worlds will change before most long-term investments have a chance to deliver a return, and few BI projects are used for more than five years. Of course, if at all possible, do use a consistent data and architectural framework, particularly conformed dimensions for related projects but do not allow this to delay the project too much.

2. Don't try and force every project to use one "corporate standard" tool.

There may be IT benefits in doing this, but the projects are unlikely to deliver the potential business benefits if you insist on using potentially unsuitable products for every project or override the end users. Remember that it is better to have two successful projects using different products than one integrated but unsuccessful project that conforms to IT standards but doesn't deliver business benefits. The OLAP Survey 3 confirms that selecting a product just because it is a corporate standard does not lead to successful projects. So, even if you have established corporate standards, set up a clear "waiver process" to evaluate whether new software should be used.

3. Don't spend forever collecting user requirements.

If you know what you're doing, you can get all you need surprisingly quickly. Focus on application categories, not long lists of mundane features which every proven product is bound to include.

4. Don't create large RFPs.

These are a waste of time for all concerned. Buying organizations waste a lot of effort creating them, vendors hate completing them and comparing the results is frustrating and time-consuming. Weighted scoring systems are inevitably simplistic and often biased. Once you know what sort of application you need, just shortlist products known to be widely used for such applications without trying to specify too many detailed

5. Do make sure your short list consist of comparable products.

All too many short lists consist of a random set of well-known, but very different, non-comparable products. The whole point of creating a short list is to select a set of products which are all capable of meeting the business needs - but many people simply pick a random list of market leaders, most of whose products may be excellent at other tasks but are wholly unsuited for meeting the current business requirements.

6. Define your business needs before meeting a salesman. Salesmen are expert in "helping" you realize that you "need" the capabilities that are the highlights of their products. More often than not, it is the best salesperson who wins the deal, not the best product. It is even worse if you didn't make sure that all the products that you short listed were suitable, as the best salesperson may be representing one of the unsuitable products.

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7. Don't do short trials of multiple products.

They are about as useful as road testing a Ferrari versus a Lamborghini in the dealer's car park. Do proper proofs of concept, which are quite different to a trial, and focus on the aspects that the products may struggle with, rather than basic capabilities such as installing the software, loading some test data and producing a few simple reports. All products can do this and there is no point in wasting time testing the obvious.

What you should be trying to test are the things that might over-stretch the products when using them for your application. This means that if you do multiple proofs of concept, the items you test may be different for each product, as they are likely to have different limiting factors. And do try to use your own real data, rather than dummy test data, when evaluating products. End users are much more likely to retain their interest and provide useful feedback if they are seeing their relevant, real and current data than if it is just random numbers of vendor-supplied sample data.

8. Visit reference sites armed with a long list of questions.

This is one of the most important phases in product selection - and make sure you talk to both end users and IT people. Do this without the vendor being present and also involve both end users and IT people from your side. See if you can find out the ratio of consulting to license spend and favor products where this is lower. And don't just accept the first reference site proposed by the vendor - at the very least, demand a list of at least half a dozen and pick one or two whose applications most resemble yours. Better still, ask to see the full customer list: it is usually the vendor, not the customers, who want to keep this secret.

9. Beware the power of the brand.

In every edition of The OLAP Survey, some of the best known, most expensive products from large vendors were reported to have delivered much less business success than relatively obscure, low cost products. If the final short list has two evenly matched products, the smaller supplier may well turn out to be the better choice and should certainly not be rejected just because it is smaller and less famous.

Equally, though a vendor may be large and financially stable, there is no guarantee that it will not neglect or even casually abandon a product that probably accounts for only a minuscule part of its total revenues. Specialist products are much more likely to fall foul of company politics and sudden changes of direction in large than small suppliers. In addition, problems take longer to fix and individual customers have less influence.

10. Test query performance in a similar environment to your own.

Before you select a product, test query performance in your own environment. If this cannot be done, try and visit a reference site with similar characteristics. If you plan to deploy a Web-based solution, make sure you evaluate the product's performance running in a realistic Web set-up (i.e., not just a demo with everything running locally on one PC).

This is much more important than detailed functionality checklists. You can live with the occasional missing feature, but every user will be reminded about poor query performance every time they use the product. The OLAP Survey 3 found that projects that explicitly used performance as a selection criterion were more successful than those that did not. In fact, this selection criterion had the highest correlation of all with subsequent project success.

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This also means that you should allow time in the project plan for performance tuning, including both data load/calculate windows and query times. If forced to trade these off, favor fast query time.

11. Always do a multiproduct evaluation when selecting BI tools.

Never just opt for a BI add-on from a database, ERP or CRM vendor without comparing it with specialist alternatives. Evidence from The OLAP Surveys shows that sites which conducted proper multiproduct, competitive evaluations had much more successful projects than those that only considered a single product. And even those who formally evaluated only a single product were more successful than those who simply used a bundled or incumbent product.

12. Not all apparently independent "research" is what it purports to be.

If vendors distribute reprints of "analyst research" or apparently independent white papers, find out exactly who paid for it. If the vendor sponsored the material, give it no more weight than you would a sales brochure. Only research that was performed independently, without vendor sponsorship, should be regarded as anything more valuable than the vendor's own advertising. And even then, vendors only pay for reprints of the most favorable independent research. So, even if the research was conducted fairly, you will not be seeing the full picture unless you pay for independent analyst research yourselves, rather than relying on the carefully selected materials that vendors sometimes pay to reproduce.

13. Don't buy more software licenses than you need.

Vendors are expert in persuading you to "buy ahead" to cover possible future phases of the project and hoped-for wider deployments. They usually offer discounts to make this seem attractive, and it is very tempting not to have to repeat the grueling software selection process. But so many things may change in the future that there's a very good chance that the extra licenses will stay as permanent shelfware that is never deployed. Not only are the license fees wasted, but you will probably be paying for years of maintenance on software that is never even installed. Even worse, you may be tempted to use up the surplus software in projects for which it is not suited.

14. Don't assume that the Web is always the best BI architecture.

In fact, intranet Web deployments are often slower and more expensive than good client/server deployments. Remember that zero-footprint DHTML doesn't give you something for nothing - all the interactivity and local processing power that would have been provided by the user's PC in a client/server architecture has to come instead from an otherwise superfluous mid-tier application server, whose hardware and software are extra costs that should not be ignored. The fact that the interactivity is delivered over the network inevitably makes the user experience more sluggish and will probably increase network traffic.

15. Try and deliver end-user applications via Excel add-ins.

Regardless of the "official" client tool, Excel is where most of the interesting data will end up anyway, so you might as well cut out the (expensive and slow) middleman. IT people are often very suspicious of Excel, but like it or not, end users won't give it up. By integrating it into the solution, the results will be much better than if users just copy (or retype) data into it with no link to the source. The OLAP Survey 3 found that Analysis Services sites which used good third-party Excel add-ins were significantly more successful than other sites using Analysis Services or other OLAP servers.

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16. Do use consultants to help choose and implement BI solutions.

Try not to use the same firm for both selecting the product and then implementing it. Implementation consultants will always favor products they know, rather than those that are right for the task. Equally, not until you know which product you will be using can you select consultants who are known to be expert in it.

Avoid using large, famous, general purpose consultants - they cost more, take longer and usually deliver less than smaller, more focused, BI specialists. Always choose the implementation consultant after choosing the product and make sure that everyone who will be implementing the solution has already used the product in at least one previous project; don't let consultants learn to use the software at your expense.

17. Try to ensure that projects are led by business users involved with the project.

In-house IT experts may have little BI experience and projects need to be business led. The OLAP Surveys consistently found that the most successful projects are led by external BI specialist consulting firms, and projects that are business led achieve more than those that are IT led. Of course, experienced IT people must be fully involved, but the project should always be "owned" by the business.

18. Aim for an initial rollout of the application within three months.

Ensure that the initial rollout is no more than six months out, because problems rapidly start to mount up at this stage. Simplify and reduce the project scope if it looks like it is going to take longer - and remember to allow for the probable delays in the project. Many projects have initial scopes that are far too ambitious, with impossible timescales. The inevitable miss causes unnecessary grief to all concerned.

19. Always allow plenty of time for dealing with poor quality or inaccessible data.

This is one of the most common problems in OLAP deployments, and you are very likely to hit it even if you think your data is squeaky clean. Don't be surprised if users of the OLAP tool immediately spot previously unsuspected data problems, because anomalies are often much more visible when data is analyzed multidimensionally.

Make sure that everyone involved is warned to expect this, so that the project doesn't lose credibility just because the source data turns out to be suspect; after all, the supposedly accurate operational reports have also been using exactly the same dubious data.

20. Always take account of the cost of software.

Even if it seems unimportant in the generously budgeted initial project, the incremental cost of additional licenses may become a serious problem if the application needs to be rolled out more widely. Many of the later candidates for the system may have a lower business justification as well as less interest in the project.

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