



10 Key Steps To Deliver Successful
Business Intelligence &
Line Of Business Analytical Applications
Whitepaper



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Delivering a Business Intelligence application which dramatically improves your company's business performance is one of the most rewarding projects you can ever work on. We know, as we have done so on over 600 successful BI projects using the Microsoft BI infrastructure.

However, it is also challenging with many real world obstacles (both technical and commercial), which is why more than 50% of all BI projects fail. By using Excel in Business, our consultants, our complimentary technology, combined with our 10 point methodology below, you can ensure that any and all BI investments are fully realized, with maximum ROI every time.

We engage with your team and match our collective resources available vs. the requirement, to provide anything from a totally outsourced BI function, to full system design and implementation, to a more advisory capacity working with your staff, empowering them to deliver faster and more reliably.

We are also passionate about your success and every single deliverable, so we will inform you of best practices honestly and openly, even being contentious if in the best interests of your project. 100% focus, 100% commitment, 100% success.

If we are not needed, then please make use of this whitepaper and its valuable lessons with our compliments.





10 KEY STEPS FOR ENTERPRISE BI SUCCESS

1	SPONSORSHIP & PROJECT KPIS	
2	BUSINESS REQUIREMENTS	
3	PROTOYPING, DESIGN & ARCHITECTURE	
4	PROJECT MANAGEMENT REVIEWS BUILT-IN	
5	IMPLEMENTATION	
6	DATA VALIDATION & QUALITY	\
7	INFORMATION PRESENTATION & DELIVERY	G≡
8	OPTIMISATION AND AUTOMATION	452- 452- 452- 452- 452- 452- 452- 452-
9	TRAINING & DOCUMENTATION	
10	SELF-SERVICE BUSINESS INTELLIGENCE	



1. Sponsorship & Project KPIs

- An Executive sponsor for any BI project is a must, along with quantifiable project objectives and clear measurements to govern project success. Beware "loose" and soft justifications like "smarter, faster decision making" and "access to more timely information to provide competitive insights". These can be supplementary benefits to back up hard metrics, but should not be used to justify an intended return on investment (ROI) given that a BI project usually requires significant company expenditure.
 - Use clear statements of intent like we are using this project to save 3% on cost of sales, manufacturing etc., which on current numbers would yield a \$120k saving per annum. So if saving is \$ 120k and project is \$ 80k initial startup cost, we seek an instant ROI of \$ 40k during the first year. That's measurable ROI that hopefully can be exceeded! It also shows others the significance and importance of the project.
- Ensure there are clear timelines for project delivery which your organization's stakeholders agree and fully commit to. "As soon as" or "sometime before our next budget cycle" = non important = lack of focus = high probability of failure! Be precise and communicate deadlines. EiB's experienced consultants can help you with this to initiate and sustain project momentum.
- Project KPIs. These should endorse the main reason for the project as specified above, with tangible measurements against each agreed delivery date. EiB's lead consultants have over 20 years of expertise on tap to help you here.

2. Business Requirements

 Scope, and perhaps even more importantly, "out of scope" requirements must be carefully defined with all business and IT stakeholders, so there is no doubt what is in scope and no doubt what is excluded (or included in a subsequent Phase 2,3, but <u>NOT</u> Phase 1).

A massive temptation which inadvertently increases the likelihood of project failure, arises through "kid in a candy shop" and "unless I ask for everything, I won't get anything" style user requirements. Remember EVERYTHING costs, so unless the requirements match directly back to one or more Project KPIs agreed in Step 1, you MUST at least question why?

Spending more money as a Phase 2 and 3 is easy PROVIDING you deliver tangible ROI quickly in Phase 1.



2. Business Requirements continued...

- Requirements should include what's needed by the application itself and in addition, any changes required by you to operational business processes to support the application. A practical example would be "for us to determine XYZ in our dashboard output, we need our operators to start capturing data relating to ABC, where that data is validated at source using the following business rules."
- The stated business requirements and project KPIs become the rationale and governing process for including / excluding items in your project. Both would be included by EiB as part of a "statement of works" to clearly define at contractual and project outset, how you and EiB will measure the project and each other's responsibilities along with all key milestones.

3. Prototyping, Design and Architecture

- Whilst Business Requirements in Step 2 must be conducted professionally and thoroughly, it can be argued that you can never truly capture everything required for a BI project upfront. Prototyping within the overall scope of the project allows ideas to be explored, tested and amended without additional cost or unnecessary rework at the end.
- Number of users, their device(s) of choice, data complexity and business rules, combined with response times needed for each report and dashboard (typically <5 seconds for 80% of the time), will help determine the architecture needed (irrespective of any On Premise versus Cloud considerations). This must be costed and planned early on and revisited in Step 8. There is zero point in having an under powered application that does the job, but nobody will use it, as it's simply too slow. When looking at the Microsoft BI platform, careful consideration and evaluation should be given to key elements like dedicated capacity of Power BI Premium versus Enterprise Gateway access using Power BI professional.</p>
- Once a BI application is live (or preferably at the planning stage), you need to think about how new developments will be addressed and introduced risk free for Phases 2, 3 etc. EiB has witnessed several initial implementation success stories which ultimately end up failing as the second round of development has resulted in making what was initially a reliable app, now buggy and untrustworthy. You need dedicated and separate IT environments you can flip between and rollback should you encounter any major issues. Development and Live environments are a "must have" minimum with optimally Development, Test and Live environments where budget permits. EiB can design and quickly configure multiple environments with you, harnessing the Microsoft BI Platform with our EiB AppStudio accelerator software. What often takes many days or even weeks of planning and execution, moving an app from one environment to the next, EiB reduces to hours / single days of effort.



4. Project Management & Reviews Built In

 If a BI project has strategic endorsement from Step 1, it has a strict timeline with key milestones and deliverables along the way. So plan in reviews in advance that are strictly milestone v deliverables v issues based and cement these in everyone's diaries. Many projects have reviews only "when needed" or "as required" which is another way of saying "we won't have a meeting until / unless the mess hits the proverbial fan."

By then it's too late and you will miss your deadlines and degenerate into knee jerk reactions to try and get back on track. If there is nothing to discuss as you are on plan and everyone can prove where they are, it's a 5 minute meeting, but better to have the discipline, regularity and professionalism.

Sometimes a person associated with a deliverable genuinely thinks it is complete, but under scrutiny from others in the project team finds out an issue hasn't been fully addressed. Better to detect and correct this on the way, than have an unpleasant event detected near "go live" day.

 It is always best when using a 3rd Party such as EiB to have a Project Manager from your organization who is responsible for the overall project and a Project Manager from EiB who is responsible for our deliverables. This provides an extra level of comfort and allows the two PMs to get through any burning issues along the way quickly, as the combination should have all the information relating to the project between them.

5. Implementation

- Deliver quick, deliver precise, deliver often, is the mantra for successful Bl. EiB will help you create the windows for build, test, signoff and deploy for each deliverable of your Bl project.
- It is essential that your "day to day" tasks and business as usual (BAU) commitments are built into any BI implementation plan, as for example, there is no point trying to test and go live with a Financial BI application, whilst at the same time completing month end accounts and participating in an external audit. Common sense says you are risking the success of all 3 activities, but it is amazing how many companies try and do this. A nice quote from a Financial Services EiB customer was "EiB recognize that you need to run a business, at the same time as implementing your BI application". You must recognise this as well.



5. Implementation continued...

When you are testing a BI application, involve the final end users when you think it
is ready, in order to get their seal of approval and to see if what you think is
obvious, really is obvious from an end user's perspective. Start with "less is more".
There are so many incidents of an enthusiastic customer sponsor training their
end users along the lines of "with this dashboard, you can drill into various
accounts and analyse them by Region, Product or Manager.

You can even drill back to the original transactions etc. Wow! This is regrettably often followed by a simple back to earth question from the user like "can I print any of these screens?" You need to consider and be empathetic to what the user is used to now, deliver that as a familiar bare minimum but quicker with less effort etc., then gradually introduce the more advanced features you know you have on tap. Users need to be comfortable that your BI app can do what they do now, then they are open to new and better ways.

6. Data Validation & Quality

 Data validation and information accuracy is the number one, two and three priority in delivering a successful BI application. There is absolutely no point in producing stunning reports and dashboards, only for an important user on day 1 to say "well that's rubbish as the magnitude of Sales in the US is totally out of kilter with what I know to be the ball park number."

This is the instant death of your BI application despite loads of good intention, planning, investment and effort. Really simple, if the user does not trust the information, they will go back to their previous way of getting their reports (even if that is more erroneous and incorrect from hand crafted spreadsheets!)

Fact!

- Ensure there is significant time allocated to your project, to determine what to do with:
 - Missing data; what do you want to happen if 50% of records you are loading don't have any Region and a key objective for the project is to improve Regional revenue by understanding detailed geographical performance? Do we reject the data and insist it is corrected? Do we reconstruct Region metadata from another fully populated field in the query or file like postcode in this example? Assuming that is reliable and error free!



6. Data Validation & Quality continued...

Erroneous data; When you encounter this issue (note the use of "when" and not "If"), you have to allow time to systematically eradicate and test your corrections before thinking of going live with any BI application. EiB's suggestion based on over 600 projects would be to double or triple any time estimates you think as reasonable in this area. There will be data issues you discover that you had no idea of at the project outset, 100% guaranteed! All data corrected must be done so in a fully automated fashion whenever possible.

You also need to have the reasons for any rejections, built into your application's logic. Informing a company that 10,000 records have been rejected from the MI so need correction, but with no rationale or explanation given against each one, is like trying to find a needle in a haystack. Be practical and hamess EiB's AppStudio software to assist you in automating notification of what needs changing in the errors analysis, so users know what to correct to make the data valid and inclusive again.

7. Information Presentation & Delivery

Information presentation and delivery is one of the most exciting and rewarding
aspects of your Bl application, but is so often rushed or completed poorly. Too
many dashboards are "thrown together" with as many visualisations as can
possibly fit on one page. Industry visualization expert Stephen Few
www.perceptualedge.com sums it up nicely as "if you want to see how dashboards
should NOT be done, look no further than the dashboard software companies."

In EiB's opinion, a well designed dashboard and/or report should be able to inform someone who is not familiar with your business, precisely how well that business is performing. Consistent usage of colour and visualisations are key in portraying the correct messages. Be very careful of the usage of Red, Green and Amber. They can't be used for just displaying any metrics on one screen, then meaning Good, Bad and OK on another. This causes confusion and mistrust.

 Despite some BI software companies positioning Dashboards as the "be all and end all" for information presentation, print quality reports and ad-hoc analysis are also required for any BI app. Drilling down a Profit and Loss statement and then through to the underlying transactions is much better achieved using EiB's ReportStudio from within Excel than using any dashboard tool.



7. Information Presentation & Delivery continued...

Likewise taking ad-hoc analysis and drilling across using a train of thought approach e.g. "that region looks weird I wonder how that is broken down by customer or product" is also an area where a reporting tool can provide more flexibility, simplicity and performance.

The key point is to ensure your BI solution can provide both visualization and reporting on the same data and business logic, so whilst tools can be added / replaced over time, the Data Warehouse, Data Mart or Power BI business model remains consistent. That is good ROI and protection against future unexpected costs.

8. Optimization and Automation

 One golden rule of Business Intelligence is that you never really understand the true performance characteristics of an application until you do it! Often customers will say "if I have 20Gb of base data and 20 concurrent users, what hardware will I need and how long will the datamart / data warehouse or Power BI model take to refresh". The honest answer is "who knows?"

There are just so many variables – network (On-Premise), internet speed (Cloud), server / VM performance, the list goes on and on. Of course approximations can and should be assessed in Step 2, but once a user community is accessing the BI app, care should be taken to optimize any resulting bottlenecks. Speed and more importantly consistency of dashboard / report access is of paramount importance.

Automation is another area that is seldom optimized or even completely embraced. There are so many apps we have seen where we hear an MI person state "at this stage I run XYZ to move the input files from server A to server B, then I can kick off the import stage". So what if that person is not there, is sick or leaves? Normally BI apps are 100% dependent on key personnel and that has to be removed / addressed, as it is a serious business risk. MI must and should just happen.

EiB has technologies, people and processes that can assist in this vital process.



9. Training & Documentation

 End User training and documentation for BI applications is different to what most people think. A lot of time generally goes into the training of how to use a Business Intelligence product, but not a lot of time goes into what the data means, what assumptions have been made on the data and how timely is the data from a user's perspective.

Users need to know for example that Cost of Sales specifically includes XYZ and ABC yet excludes DEF and it is updated overnight, so the data they are looking at is always as at close of play yesterday. Sounds obvious? That's why it is so often forgotten, resulting in either disgruntled users and/or a support desk nightmare. Document what the information means, how it is used / should be used and above all the timeliness.

Notwithstanding the above, End Users still require training on the final BI application and the general rule for starters is "less is more." A BI application can have all sorts of thrilling functionality such as drill down, drill across, drill through to the underlying transactions, filter top customers / products etc., but if your previous "system" was an Excel workbook, this can be daunting and off putting. Get users using the basics well and then use their enthusiasm for driving the next levels of training and functionality.

10. Self-Service Business Intelligence

- · Self service Business Intelligence only works when:
 - The data in the reporting database(s) is fully reconciled and eradicated of any erroneous or missing data documented in step 6;
 - ii. There is a clear understanding and definition of terminology, KPIs and calculations, so a user does not just pick Net Profit as a KPI for a new Dashboard (and assume their own definition of what Net Profit actually means), they know that Net Profit = Gross Profit Operating Costs Overheads and that the data was last updated at a specific time;
 - iii. Business logic is precise and fully communicated. In many BI applications, it's not just as simple as taking information from an operational system (Finance, CRM, Sales) and making it available in the MI. Under certain circumstances, information may need to be substituted.



10. Self-Service Business Intelligence continued...

Local v Corporate Dashboards

i. So we now assume from the previous paragraph that the data is sanitized, correct and fully understood by each end user. They can now use state of the art BI tools like Power BI and EiB's ReportStudio, to reliably create their own reports and dashboards.

This is good and represents self service to meet user driven requirements here and now. However thought should be given as to the process of what actually happens when an individual's insights need to become corporate performance management reports i.e. an individual's findings need promoting to the company wide set of common Dashboards and Reports.

Furthermore, if a user is allowed to copy a corporate dashboard to become the start point for their individual customized analysis, how would other users know if they were looking at the corporate version of the dashboard or the individual's take? These are detailed but very important points.

Simple use of colored banners is one way EiB has seen this work. Blue banner = corporate dashboard, Grey banner = individual self service dashboard.

No debates or ambiguity. Keep it simple!

We hope you have found this Whitepaper interesting and can put to good use its key messages to ensure your BI application is successful.

If you have any questions or wish to see how EiB could accelerate your implementation then visit our website www.excelinbusiness.com



OUR COMPANY

Headquartered in London, England, Excel in Business, is a leading supplier of self-service analytical applications designed and deployed from within Excel and PowerBI.

Our core business includes financial management, management reporting and performance dashboard applications delivered to enterprise and mid market organisations.

Excel in Business' mission is to provide fast, simple and scalable reporting applications which can be designed and developed by power-users in record timescales.

Our products use the robust, industry standard Microsoft data warehousing platform so that such applications are developed with IT's endorsement.

OUR PRODUCTS



The integrated combination of our EiB AppStudio and EiB ReportStudio products.



Visual development environment for the creation of selfservice analytical applications which can be run from client and server computers. Environment is directly available from Excel for users who are permitted as application authors.

Visual EiB AppStudio tools for:

- ☐ Loading data from relational databases, ODBC, Excel and CSV files
- ☐ Visual objects to transform, combine and manipulate source data, with calculation and rules engine to augment your data
- ☐ Ability to combine multiple data sources into a single model or multiple models.
- ☐ Output to SQL Databases or SQL Data Marts (Analysis Services models) to complement your data warehouse or MI environment
- Ability to augment applications through enabling data entry for additional data e.g. forecasts and plans
- ☐ Full documentation of AppStudio designs and documentation of any and all data warehouse databases and data marts





Excel based reporting suite for your data warehouse, data mart systems and/or AppStudio models.

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Ц	Dashboard module allows data from anywhere to be graphically rendered as native
	Excel based dashboards. Contains many advanced charts such as bullet charts,
	spark lines and spark-bandlines, gauge charts, waterfalls, etc.
	Cube reporting module in Excel provides flexible interactive reporting on top of any
	Microsoft based data mart using SQL Server Analysis Services or SQL Server
	Analysis Services Tabular models. Train of thought analyses functionality provides
	powerful ad-hoc interrogation of data
	,
	SQL reporting module in Excel provides flexible interactive reporting on top of any
	Microsoft SQL Server or Oracle database/data warehouse
	Report distribution module (RDM) in Excel provides mass distribution of either
	dashboards, Cube reports or SQL reports to cloud service storage devices e.g.
	OneDrive, Google Docs, Box, Dropbox etc. or to end-users via email in a variety of
	formats, such as Excel, PDF, web page, etc.
	Torridas, Sucrias Excer, FDF, web page, etc.



Excel based application which automates single or multi company financial reporting.

	ANALYTICS
	Application software which produces and distributes your month end management accounts, including financial reports (P&Ls, balance sheets) and dashboards
	Available for leading accounting systems
	New accounting system adaptors available on demand
	Embedded Structure Designer facilitates the rolling up of accounts into different
	financial statements e.g. P&L, Investor P&L, Group P&L, Bank Reports, Statutory P&L
	etc.
	Application which generates Microsoft SQL Server Analysis Services data marts
	(Cubes) for fast access and flexible presentation of financial data
П	Contains standard 'out of the box' reports plus report and dashboard designer all
_	from within Excel and Power Bl
_	
Ч	Includes budgeting and forecasting module, with direct import and/or direct data
	entry modes
	Has optional multi currency modules for flexible P&L and balance sheet consolidations using any combination of exchange rates e.g. period end, average, opening etc.





EiB Insurance Analytics for MGAs, Underwriters, Insurers and Brokers automates the delivery of meaningful management information to your underwriters, board, shareholders and carriers.

	Comprehensive monthly analysis of all pertinent Premium and Claims data Automated triangulations of complex KPIs such as Earned Premium saving days per month
	Automated validation, rejection and auditing of all invalid risk and claims information > better quality and self-healing MI
	Standard monthly application can be extended to handle daily information across
	any number of underwriting years Data can be combined seamlessly from different risk software vendors and claims
	houses or EDI outputs
_	requirements without leaving Excel, including Dashboards, Management Reports,
	Based on industrial strength IT infrastructure: Microsoft BI SQL Server – Analysis Services - Power BI - Excel - Architecture
	Lowest cost of ownership and reporting platform for the insurance industry.
	Complete reporting environment for all your internal and carrier reporting requirements without leaving Excel, including Dashboards, Management Reports, Operational Reports and Report Distribution Based on industrial strength IT infrastructure: Microsoft BI SQL Server – Analysis Services - Power BI - Excel - Architecture



EiB Shipping Analytics is about delivering an open, integrated and highly scalable self-service analytics platform, across all your ShipNet data, internal applications and external data sources

	ANALTITOS
	Comprehensive monthly analysis of your accounting data by Company, Vessel, Cost Centre,
	Port, Commodity etc.
	Automation / Semi Automation and Manual capture of industry standard Shipping KPIs as
	defined by shipping.org
	Incorporation of Company specific KPIs and targets
	Full Commercial analysis of prebuilt Time Charter Equivalent (TCE) and Cargo data-marts
	Complete reporting environment for all your internal and ship management reporting
	requirements without leaving Excel, including Dashboards, Management Reports,
	Operational Reports and Report Distribution
	Based on industrial strength IT infrastructure: Microsoft BI SQL Server - Analysis Services -
	Power BI - Excel - Architecture
П	Open reporting and MI platform for the Shipping industry.
_	open reporting and wirplation into imposing industry.



PAUL MARTIN

Paul has over 25 years' experience working in the areas of business intelligence, data visualisation, management and financial reporting. Paul has expertise in advising and implementing systems for both large corporates and medium sized businesses.

He International began his career at Computers Limited (ICL) which was known in the industry as the UK equivalent of IBM. There he competed in very big ticket reporting software sales and looked after major public sector accounts such as the Department of Trade and Industry, the Inland Revenue, HM Customs and similar. He then founded HMG Consulting. implementing executive information. budaetina forecasting and systems for five years, advising companies about their strategic reporting requirements and the processes/software needed to fully address these areas.

Paul was headhunted to run the UK sales operation of Gentia Software, who competed against established business intelligence competitors such as Cognos, Hyperion (now Oracle), Business Objects (now SAP), and Micro Strategy. He was on the management team that concluded a successful Initial Public Offering (IPO) on the NASDAQ. Here his team also introduced the first computerised balanced scorecard. transforming management deliverable theory into а software application.

Following this Paul cofounded both ProClarity UK (now Microsoft) and Intelligent Apps (now Sage), where he recognised trends like the influence and market share of Microsoft in the data warehousing space and Excel as a credible and desirable front end tool for companies to adopt for their reporting.



Software from these two companies, at both of which Paul was CEO, resulted in sales to major corporations such as Reuters, Morgan Stanley, Reckitt Benckiser, Shell and hundreds of other reputable and sizable organisations.

Attracting the attention of Sage in the UK, a system was built over their existing accounting solutions which proved very successful. This resulted in the acquisition of IntelligentApps in 2004 by Sage and Paul running Sage's Business Intelligence division.

After leaving Sage in 2006 to establish Excel in Business with co-founder and CTO Nico Kichenbrand, Paul and Nico have concentrated on developing their own product on their own terms, and being able to provide cost effective customer services utilising an innovative virtual model. This allows their consultants to be 'onsite' anywhere worldwide in minutes.



EXCEL IN BUSINESS ETHOS

Excel in Business (EiB) and the EiB Analytics software solutions we offer, come as a result of looking at what businesses really need for self-service analytics, management and financial reporting.

Having worked on over 600 customer implementations, as well as consulting with industry visualisation specialists, business intelligence experts and software developers, we realised that Excel is undoubtedly the most effective and widely deployed reporting platform used by businesses.

Microsoft have now extended their Excel platform to management dashboards through their Power BI software. EiB Analytics solutions fully harnesses both Excel & Power BI.

Research into usage backs this up, with an estimate of 300-500 million users of Excel worldwide. Not all of these organisations use Excel for business reporting of course, but according to independent research, an estimated 11% do. This means there are somewhere between 33-55 million Excel reporting users worldwide, far bigger than the sum of all other reporting and business intelligence products user bases combined.

So with our development team, we sought to build additional functionality for this widely-adopted program, allowing businesses the opportunity to make the most of their existing data, wherever it may be. We consulted with IT departments to ensure any perceived shortfalls of Excel, such as scalability and security, were not only fully addressed but became an actual strength of our Excel based EiB Analytics software.

Add Power BI to EiB apps and the result is a fully scalable BI apps environment from SMEs to Corporates.

Our organisation was started in 2006, with an aim to create brand new self-service dashboarding and reporting software which could be installed from within Excel.

Creating a smaller company away from the larger business intelligence and system vendors meant that we could concentrate on creating innovative reporting solutions to address known business problems yet without the usual upfront and ongoing costs associated with wide scale adoption. This means for the first time, reporting systems using EiB Analytics can be deployed to hundreds of users for the same cost as a small departmental solution from other comparable vendors.

With our EiB Analytics software applications and associated services solutions, we offer organisations of all sizes the chance to target and use their existing data to drive their businesses efficiently and effectively. We would welcome the opportunity to show you why we have become so successful using our approach.



FURTHER READING

Stephen Few

www.perceptualedge.com

Stephen Few founded Perceptual Edge in 2003. With 30 years of experience as an innovator, consultant, and educator in the fields of business intelligence and information design, Stephen is a leading expert in data visualisation for sense making and communication.

Delivering Self-Service Analytics

- 10 things you need to know

Providing Effective Dashboards

- 10 things you need to know

www.excelinbusiness.com/guides

Edward Tufte

www.edwardtufte.com

Edward Tufte is an American statistician and professor emeritus of political science, statistics, and computer science at Yale University. He is noted for his writings on information design and as a pioneer in the field of data visualisation

