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Discovering Strategic Direction Through Effective Interview Design

“If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask... for once I know the proper question, I could solve the problem in less than five minutes.”

Albert Einstein

Executive Summary

Identifying and defining solutions for concerns with technology, operations, or processes often begins with information-gathering interviews involving executives and subject matter experts (SME) familiar with the problem. However, interviews that are poorly planned, executed, or documented diminish the value and clarity of the data collected, which typically increases expenses and amplifies the risk that solutions designed through the process will fail. Effective interview design is critical to the efficacy of the process.

Creating Interviews that Inform Strategic Decisions

When conducting a series of interviews to collect, analyze and convert data into information with sufficient clarity to inform and support the solution of strategic challenges, beginning with effective interview design is critical. Effective interview design encompasses several elements:

Organizational Understanding/Personnel Selection

Interview planning begins by identifying the participants who can best articulate the challenges or problems facing the organization. Selecting knowledgeable executives and SMEs who are familiar with the challenges and who are most representative of the larger organizational structure is most effective. Failure to involve them as participants will ultimately diminish the quality of the information delivered.

Interview Scheduling

Participants must receive sufficient advance notice of the interview day, time, and purpose to ensure their willingness and comfort with the process. Failing to verify their ability or providing limited time for them to prepare will affect their attitude and diminish the quality of data collected.

Question Development

The quality of data gathered through the interview process depends largely upon the quality of the questions posed to participants. Advance consideration and development of questions addressing the challenge or problem is a crucial component of interview design.

Interviewer Involvement

The most critical component of any effective interview is the degree to which the interviewer is focused and present throughout the interview. A perceived lack of involvement on the interviewer's part diminishes the quality of the data collected and wastes the time of the participants.

Data Capture, Analysis & Information Delivery

The approach for capturing, documenting, and analyzing interview data should directly address the original business challenge. Failing to do so diminishes the overall quality of the data and the value of the information.

How Effective Interview Design Addressed a Real-World Challenge

To demonstrate the role effective interview design plays in informing and enhancing the overall strategic decision process, what follows is a real-world example exploring the planning, methodology, and impact of the interviews and the information they produced.

The Client & Business Challenge

The client was a privately held \$11 billion consumer products goods company with operations in 35 states. Company leadership established a goal of building an enterprise data warehouse (EDW) to collect consumer demographic and purchasing data, along with a process for implementing business intelligence (BI) tools to analyze and report the results. The effort was part of a larger multi-year program that eventually involved a \$30+ million investment in EDW/BI technologies.

The interviews described in this white paper served as the initial step of this program, setting the strategic direction and pace of the client's EDW/BI implementation journey. Successful outcomes began with effectively planned and executed interviews.

Organizational Understanding/Personnel Selection

The team decided to collect insights on high-level EDW data and BI business requirements by conducting initial interviews with key executives throughout the enterprise. In turn, these executives identified SMEs within their organizations as participants in a second round of interviews focused on identifying EDW/BI technical requirements. The team requested and developed organizational charts to ensure a clear understanding of the company's structure.

Twelve senior executives whose teams would be significant users of new EDW/BI technologies were selected for the initial round. These executives then identified 47 SMEs (BI/EDW power users) to participate in the second-round interviews.

Interview Scheduling

Once the executives for the first round were selected, interview scheduling began. Participant availability was confirmed in advance (several weeks in many cases), with advance conference room scheduling and video conferencing arranged for remote interviews. First-round interviews were conducted individually, while the second-round SME interviews frequently involved group sessions. Whenever possible, interviews were conducted in person, with a one-hour duration. Participants received interview objectives and the list of questions in advance, allowing time for them to consider the challenges and prepare for the interviews. A total of 44 interviews involving 59 stakeholders were conducted over three months.

Question Development

As noted earlier, advance consideration and development of questions is a crucial component of interview design. The most effective questions are open-ended and crafted to facilitate further discussion and identify what is not yet known or anticipated about the client's business challenge.

Effective questions can encourage organizations to consider new perspectives related to the business challenge and acknowledge unknown problems. The team prepared the following interview questions:

Executive Management Interview Questions

- What management/performance report data do you use in the performance of your jobs?
- How are your management reports prepared, and by whom?
- What key performance indicators (KPI) or metrics are used? What KPIs/metrics are not available but needed?
- From a BI/management reporting perspective, what does the client excel at?
- From a BI/management reporting perspective, what does the client do poorly, or not at all?
- What data and/or technologies are not available but needed?
- What guidance/recommendations would you provide as we progress through the EDW/BI project?
- Whom within your organization would you recommend we speak to next? Are they available to participate in the EDW/BI project?

SME Interview Questions

- What BI tools or technologies are you currently using?
- What data is necessary to perform your job that is not currently available?
- What difficult data manipulations are necessary to perform your job?
- What key KPIs or reports are you required to prepare in the performance of your job?
- What KPIs or reports are not easily prepared or are unavailable due to technology limitations?
- From a data availability and/or BI tools usage perspective, what technologies currently work well for you from a job performance perspective?
- As we move forward, what recommendations would you make to improve your current BI/EDW situation?

Interview Presence

The importance of the degree to which the interviewer is focused and present throughout the interview cannot be overstated, whether the interview is face-to-face or through remote video conferencing. In-person interviews are preferable because they provide non-verbal communication cues that may be invaluable. In addition, planning should address the interview environment to ensure sessions are comfortable and free of distractions such as cell phones.

Even though participants have received the interview questions in advance, the interviewer should be sensitive to their responses and if necessary, allow discussions to move into another direction when warranted. The prepared questions should serve as a roadmap to collect the data essential to solving the client's original business challenge.

Data Capture, Analysis & Information Delivery

Once interviews had been conducted, the team performed a comprehensive analysis of the notes and created a presentation of the information they contained. As a rule of thumb, for every hour spent interviewing, at least two hours should be allotted to review, analyze, and summarize notes for presentation purposes.

In this example, the team performed the following data analysis:

Capture

The process of capturing and documenting interview results for analysis is critical. While an interviewer's choice of data capture is a matter of preference, research indicates handwritten notes are more effective and can deliver improved information over methods such as using laptop

computers. Recording interviews (with the client's permission) is a helpful practice because it allows the interviewer to refine interview notes by reviewing recordings afterward.

While multiple interviewers may be present in different roles (e.g., discussion lead or scribe), the lead interviewer's notes should be the primary focal point for post-interview analysis. Notes from the person leading discussions are usually most effective at understanding interview discussion points or new themes, although notes from other participants may enhance the quality of data.

As soon as possible after interviews, notes should be collected from all interviewers (assuming more than one), edited for verbiage/spelling, and consolidated into a single document. If the interviews were recorded, the consolidated notes should include reviews of the recordings. These consolidated notes should be retained for possible review by the client or as a supplement to the final client deliverable.

For the \$11 billion consumer product goods company, the first-phase executive management and second-phase SME interviews resulted in 94 pages of consolidated, detailed notes.

Organization

After completing interviews and preparing detailed notes, the team turned the data into actionable information. While the notes reflected responses to the original questions, additional themes emerged. For this reason, the data (e.g., interview notes) was reorganized to reflect the direct answers to questions and group the unanticipated themes across interviews. The team took the following steps with interview notes:

Outline Development

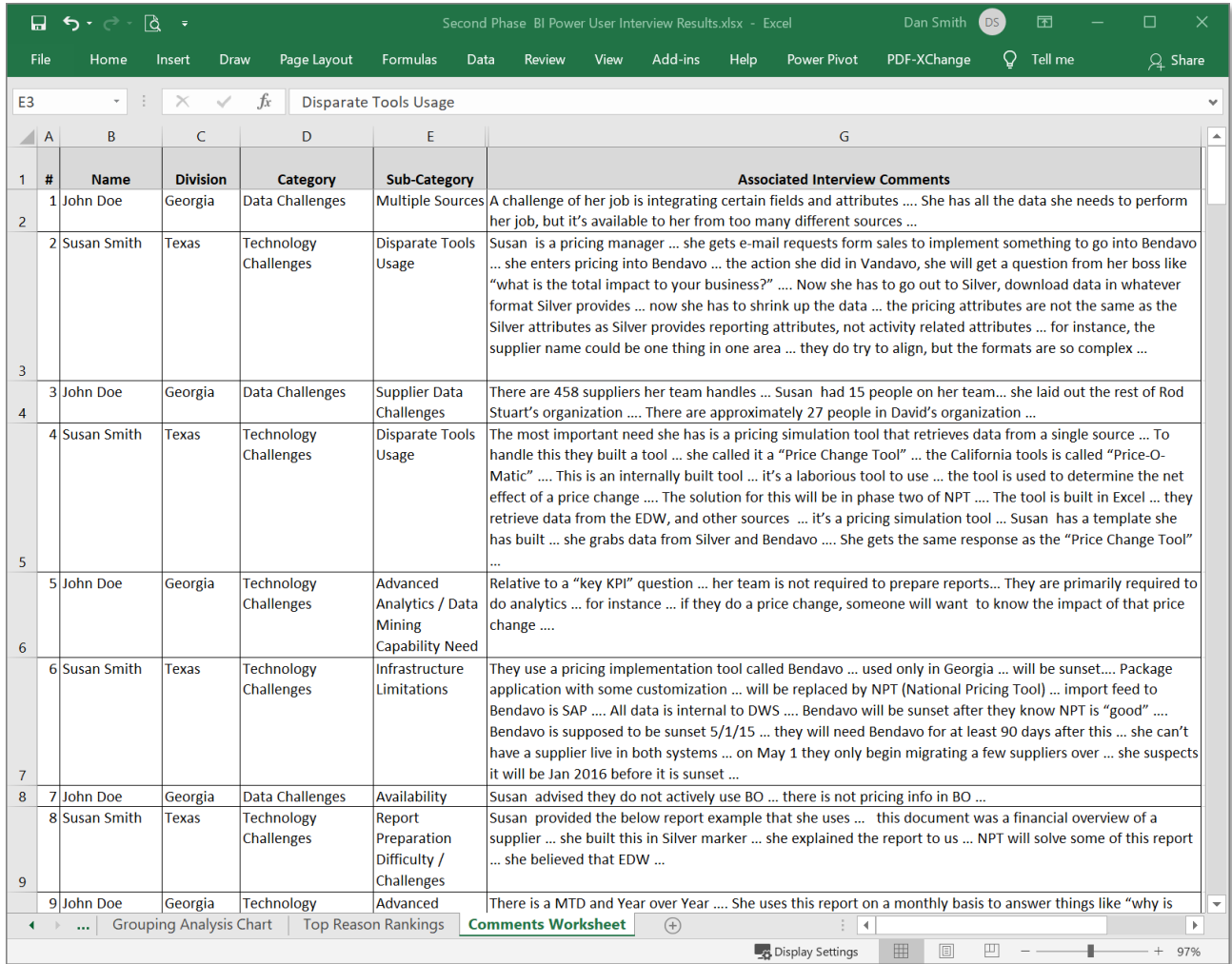
Interview notes were captured and merged into a single document using Microsoft Word. Using outline mode from the Microsoft Word View menu, individual responses/sentences were grouped into related categories. The resulting categories were not necessarily aligned with questions asked during the interviews. This effort not only grouped responses that accurately answered specific questions, it also identified unanticipated themes of data related to the client's business challenge and helped to help standardize responses across all interviews.

Taxonomy Development

The team developed a taxonomy using the Word Outline document of grouped answer data and unanticipated interview themes. This categorization had multiple levels that were uniquely developed and specific to the client's business challenge.

Database Creation

Interview responses were also moved into a database to facilitate effective data analysis. This step was time-consuming but valuable due to the complexity of the business challenge and potential risk associated with failing to design a correct solution. The Microsoft Excel worksheet appearing below demonstrates how interview comments were categorized.



#	Name	Division	Category	Sub-Category	Associated Interview Comments
1	John Doe	Georgia	Data Challenges	Multiple Sources	A challenge of her job is integrating certain fields and attributes She has all the data she needs to perform her job, but it's available to her from too many different sources ...
2	Susan Smith	Texas	Technology Challenges	Disparate Tools Usage	Susan is a pricing manager ... she gets e-mail requests from sales to implement something to go into Bendavo ... she enters pricing into Bendavo ... the action she did in Vandavo, she will get a question from her boss like "what is the total impact to your business?" Now she has to go out to Silver, download data in whatever format Silver provides ... now she has to shrink up the data ... the pricing attributes are not the same as the Silver attributes as Silver provides reporting attributes, not activity related attributes ... for instance, the supplier name could be one thing in one area ... they do try to align, but the formats are so complex ...
3	John Doe	Georgia	Data Challenges	Supplier Data Challenges	There are 458 suppliers her team handles ... Susan had 15 people on her team... she laid out the rest of Rod Stuart's organization There are approximately 27 people in David's organization ...
4	Susan Smith	Texas	Technology Challenges	Disparate Tools Usage	The most important need she has is a pricing simulation tool that retrieves data from a single source ... To handle this they built a tool ... she called it a "Price Change Tool" ... the California tool is called "Price-O-Matic" This is an internally built tool ... it's a laborious tool to use ... the tool is used to determine the net effect of a price change The solution for this will be in phase two of NPT The tool is built in Excel ... they retrieve data from the EDW, and other sources ... it's a pricing simulation tool ... Susan has a template she has built ... she grabs data from Silver and Bendavo She gets the same response as the "Price Change Tool" ...
5	John Doe	Georgia	Technology Challenges	Advanced Analytics / Data Mining Capability Need	Relative to a "key KPI" question ... her team is not required to prepare reports... They are primarily required to do analytics ... for instance ... if they do a price change, someone will want to know the impact of that price change
6	Susan Smith	Texas	Technology Challenges	Infrastructure Limitations	They use a pricing implementation tool called Bendavo ... used only in Georgia ... will be sunset.... Package application with some customization ... will be replaced by NPT (National Pricing Tool) ... import feed to Bendavo is SAP All data is internal to DWS Bendavo will be sunset after they know NPT is "good" Bendavo is supposed to be sunset 5/1/15 ... they will need Bendavo for at least 90 days after this ... she can't have a supplier live in both systems ... on May 1 they only begin migrating a few suppliers over ... she suspects it will be Jan 2016 before it is sunset ...
7	John Doe	Georgia	Data Challenges	Availability	Susan advised they do not actively use BO ... there is not pricing info in BO ...
8	Susan Smith	Texas	Technology Challenges	Report Preparation Difficulty / Challenges	Susan provided the below report example that she uses ... this document was a financial overview of a supplier ... she built this in Silver marker ... she explained the report to us ... NPT will solve some of this report ... she believed that EDW ...
9	John Doe	Georgia	Technology	Advanced	There is a MTD and Year over Year She uses this report on a monthly basis to answer things like "why is

Analysis

Development of the Excel interview database made data analysis and information creation easier. For example, Excel pivot tables were created and analyzed for the two different groups of interviewees. Leveraging these tables and performing other analysis actions (such as descending sort count rankings of the interview data) allowed consistent interview themes to emerge. The following information emerged from the two types of client interviews:

Executive Interviews

#	Interview Results Categorization	#	% of Total
1.0	Technology Challenges	92	33%
1.1	Infrastructure Limitations	27	10%
1.2	Disparate Tools Usage	23	8%
1.3	eCommerce Capability Improvement Needs	21	8%
1.4	Advanced Analytics / Data Mining Capability Need	10	4%
1.5	Report Preparation Difficulty / Timeliness	7	3%
1.6	Mobility Technology Needs	4	1%
2.0	Data Challenges	73	27%
2.1	Availability (e.g. non-existent or difficult to access / manipulate)	23	8%
2.2	Alignment of Data (e.g. across the enterprise is not consistent)	18	7%
2.3	Supplier Data Challenges (e.g. supplier requesting unique data presentation vs. standardization)	13	5%
2.4	Multiple Sources (e.g. personnel need to go to multiple locations for data)	12	4%
2.5	Accuracy	7	3%
3.0	Organizational Considerations	63	23%
3.1	Impetus For Change (e.g. strong need / impetus to change the way BI and EDW is handled today)	38	14%
3.2	Key Dept. contributions and Involvement (e.g. these groups have a key role to play in program)	15	5%
3.3	Report Prep Responsibility (i.e. groups responsible for report prep have role to play in program)	6	2%
3.4	Limited Collaboration (e.g. lack of collaboration between divisions has impacted BI improvement)	4	1%
4.0	Project Considerations	28	10%
4.1	Corporate Wide Support / Accountability (e.g. program needs support throughout enterprise)	13	5%
4.2	Early Wins (e.g. to gain traction quickly the project needs early wins)	8	3%
4.3	Project Value / Justification	4	1%
4.4	Project Naming (e.g. we should consider changing the name of the project from EDW)	3	1%
5.0	Data Governance	19	7%
5.1	Classification Correctness (e.g. governance needs to correct issues with data classification across divisions)	9	3%
5.2	Data Ownership (e.g. data governance is needed to help force ownership of data)	8	3%
5.3	Value of Data (e.g. client data is valuable and needs to be governed to better leverage the value of this data)	2	1%
Grand Total		275	100%

Subject Matter Expert Technical Interviews

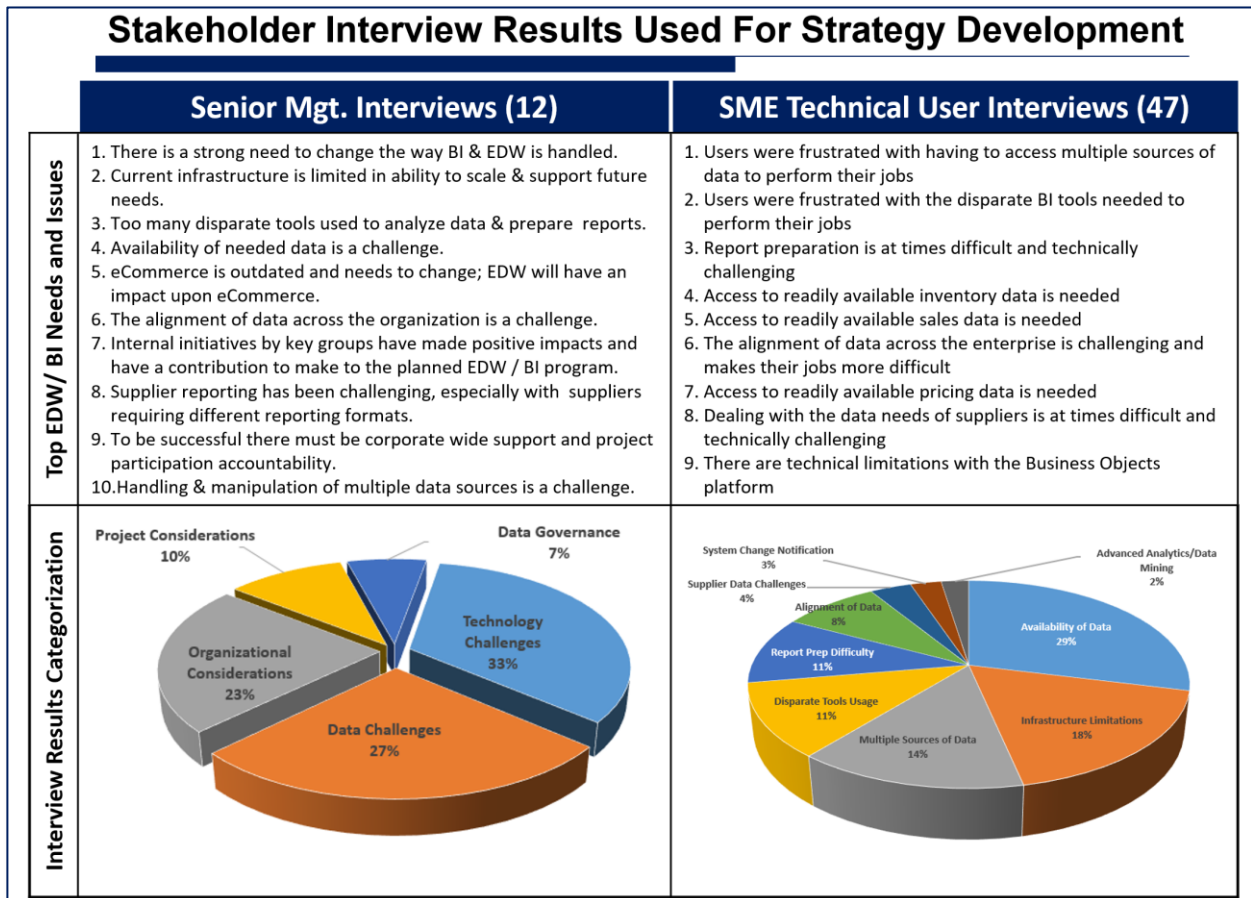
#	Interview Results Categorization	#	% of Total
1.00	Data Challenges	183	55.1%
1.10	Availability of Data	96	28.9%
1.11	Inventory	26	7.8%
1.12	Sales	23	6.9%
1.13	Pricing	17	5.1%
1.14	Product	10	3.0%
1.15	Compliance	8	2.4%
1.16	Control State Data	6	1.8%
1.17	Historical	5	1.5%
1.18	Human Resources	1	0.3%
1.20	Multiple Sources of Data	47	14.2%
1.30	Alignment of Data	28	8.4%
1.31	Groupings / Classifications	20	6.0%
1.32	Nomenclature	8	2.4%
1.40	Supplier Data Challenges	12	3.6%
2.00	Technology Challenges	140	42.2%
2.10	Infrastructure Limitations	59	17.8%
2.11	NSM	13	3.9%
2.12	Business Objects	11	3.3%
2.13	Network Performance	7	2.1%
2.14	Diver	7	2.1%
2.15	EDW	6	1.8%
2.16	Business Warehouse	5	1.5%
2.17	Cube	3	0.9%
2.18	SalesNav	2	0.6%
2.19	SAP	1	0.3%
2.20	Vendavo	1	0.3%
2.21	NPT	1	0.3%
2.22	E3	1	0.3%
2.23	SSRS	1	0.3%
2.50	Advanced Analytics / Data Mining Need	8	2.4%
3.00	Organizational Considerations / System Change Notification	9	2.7%
3.10	Grand Total	332	100%

Delivery

Detailed interview results were delivered to the client using Microsoft Word, with summaries in PowerPoint. The extensive amount of interview data collected, analyzed, and turned into information related to the client's original business challenge resulted in several high-level findings:

- Disparate tools and platforms, data replication across platforms, non-standard and missing data, poor data governance, and system performance issues existed across the enterprise.
- Since 1968, infrastructure and data governance had developed in a relatively isolated manner from site to site, providing inconsistent, inaccurate, and untimely management information both internally and to customers.
- The current infrastructure encompassed 19 BI tools, 10 database systems, three ETL tools, 19 back-office systems, and 13 known external interfaces.
- There were at least 35 interfaces of varying degrees of complexity and functionality connecting the internal systems.
- Known databases were estimated at 11.8 terabytes of storage, with approximately 7,250 BI users of varying degrees of usage frequency and complexity.

Drilling down further into the data, the interviews generated the following key points of information:



Benefits to the Client

Leveraging the information generated from the interviews, the client successfully established a strategic direction for their EDW/BI program, allowing them to begin processes for:

1. Developing both current and future state EDW/BI architecture documentation.
2. Developing blueprints and timelines for the current state-to-destination architecture journey.
3. Preparing the detailed request for proposal (RFP) document for release to over 40 pre-vetted system integrators.
4. Selecting a vendor and beginning the actual EDW/BI implementation journey.

Recommendations

- Before companies make strategic decisions to address foundational, complex, enterprise-wide architectural, organizational, or operational challenges, developing and executing effective interview strategies provide the opportunity to collect and analyze relevant data from key stakeholders.
- That data can better inform the decision-makers, increasing their confidence in the selected course of action and reducing the risk of making incorrect or uninformed choices.
- Achieving the desired result from the interviews begins with thoughtful attention to interview design.

To learn more about the role effective interview design can play in informing your company's strategic decisions, reach out to BCS today at Dan.Smith@BCSInc.org