

**TDWI** RESEARCH

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## 2009 TDWI Salary, Roles, and Responsibilities Report





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# 2009 TDWI Salary, Roles, and Responsibilities Report

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### About TDWI

The Data Warehousing Institute™ (TDWI), a division of 1105 Media, Inc., is the premier provider of in-depth, high-quality education and research in the business intelligence and data warehousing industry. TDWI is dedicated to educating business and information technology professionals about the strategies, techniques, and tools required to successfully design, build, and maintain business intelligence and data warehousing solutions. It also fosters the advancement of business intelligence and data warehousing research and contributes to knowledge transfer and professional development of its Members. TDWI sponsors and promotes a worldwide Membership program, quarterly educational conferences, regional educational seminars, role-based training, onsite courses, certification, solution provider partnerships, an awards program for best practices, resourceful publications, an in-depth research program, and a comprehensive Web site ([www.tdwi.org](http://www.tdwi.org)).

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## PURPOSE, METHODS, AND DEMOGRAPHICS

### Purpose

The purpose of this report is to gain a better sense of the people and teams who built and maintained business intelligence (BI) and data warehousing (DW) solutions during the 2008 calendar year. This report uses the term “BI” to refer to both business intelligence and data warehousing initiatives, and the term “BI professionals” for the individuals who deliver these initiatives. Specifically, the report looks at individual compensation, roles, responsibilities, skills, and experience among BI professionals. It also provides profiles of the 10 most common BI roles, examining age, gender, education, job satisfaction, salary and bonus, certification, background, and other characteristics.

### Methods

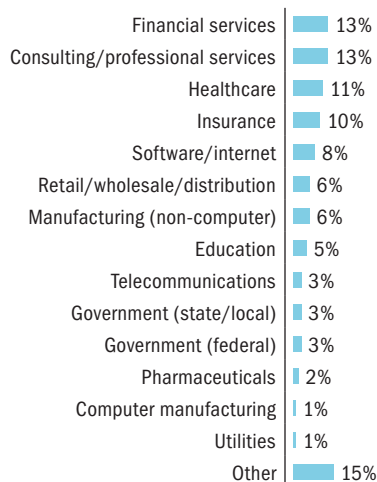
This report is based on a Web survey of 1,198 qualified data warehousing and business intelligence professionals in the U.S. and Canada conducted in the fall of 2008. To ensure the greatest accuracy of our compensation data, results from worldwide BI professionals are not factored in. Qualified respondents are full-time IT professionals, consultants, systems integrators, or business sponsors or users. Responses from vendor representatives in sales, marketing, and development; professors and students; and part-time employees were not counted. Multi-choice answers and rounding account for totals that do not equal 100 percent.

### Demographics

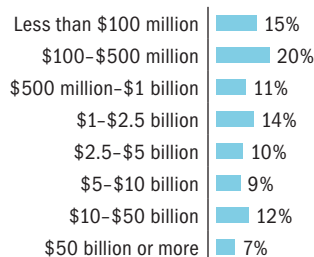
Financial services and consulting/professional services are virtually tied for the top spot among industries represented in the 2009 TDWI salary survey, with each represented by close to 13 percent of respondents. Over the past few years, these two industries have held the lead as the best-represented industries in the TDWI salary survey. Financial services organizations have always been on the cutting edge of business intelligence and data analytics, employing the latest tools and techniques to assess market risk and customer patterns. The large presence of respondents from the consulting and professional services industry reflects the demand among organizations for BI/DW expertise. Other industries well represented in this survey include healthcare, insurance, software/Internet, retail/wholesale and distribution, manufacturing (non-computer), and education.

Respondents to this survey represented the entire range of company sizes, from small organizations to large corporations or government agencies. Larger organizations (with annual revenues exceeding \$1 billion) had the largest slice of this year’s respondent base (52 percent), a share consistent with last year’s survey.

#### INDUSTRY REPRESENTATION



#### ORGANIZATION REVENUES

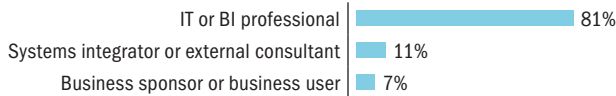


**WHICH BEST DESCRIBES YOUR ORGANIZATION'S BI IMPLEMENTATION?**

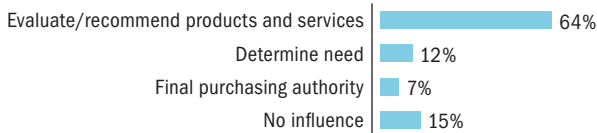
	2008	2007	2006	2005
Beginner—We're getting serious about BI for the first time	19%	15%	18%	21%
Intermediate—We have deployed a data warehouse and are looking to add more value	52%	*	*	*
Advanced—We manage a relatively mature BI environment that delivers significant business value	28%	21%	21%	20%

\*2005–2007 surveys had varying definitions for “intermediate” BI

**POSITIONS**



**PURCHASING AUTHORITY OF INDIVIDUALS**



**INDUSTRY PROFILE BY AGE**

	25 or younger	26–35	36–45	46–55	56 or older
2008	1%	29%	39%	24%	7%
2007	2%	28%	40%	25%	5%
2006	1%	27%	42%	23%	6%
2005	1%	25%	42%	25%	6%

**INDUSTRY PROFILE BY GENDER**

	Men	Women
2008	71%	29%
2007	73%	27%
2006	72%	28%
2005	72%	28%

The survey shows that BI/DW has reached a greater stage of maturity among an increasing number of enterprises. Close to three out of 10 respondents say they now have what can be considered “advanced” business intelligence deployments that deliver significant business value, up from 21 percent a year ago and in prior TDWI surveys. About one out of five remain in the “beginner” stages of BI implementations, a number consistent with previous surveys. A majority of respondents, 52 percent, report they are in an “intermediate” phase of BI implementations, meaning they have deployed at least one data warehouse and are seeking to increase their BI efforts.

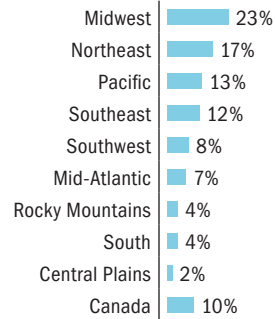
Most respondents to this survey are intimately familiar with data management practices, and are in a position of influence in terms of solutions purchased within their organizations. More than eight out of 10 individuals taking this survey identified themselves as IT or BI professionals. Another one out of 10 respondents work for systems integrators or external consulting firms. About 7 percent indicated they were part of the business, either as sponsors or business users. Eighty-three percent of survey respondents are actively engaged with the process of specifying, evaluating, or approving BI solutions and services.

As has been the case with previous surveys in this annual series, the majority of participants tend to be males in their 30s and 40s. The largest segment of respondents—four out of 10—is between the ages of 36 and 45. With a mere 1–2 percent of BI professionals in their early 20s, the survey results indicate that few IT professionals begin their careers in BI. Anecdotal evidence shows that many work in database administration or system management for several years before moving into BI. In terms of gender, almost three out of 10 respondents are women, but this percentage has changed very little since this question was first asked in the survey in 2005.

**BI professionals are mostly males in their 30s and 40s.**

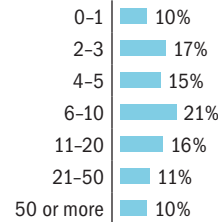
The survey included BI/DW professionals from across nine regions of the U.S., as well as Canada. Close to one out of four respondents are based in the Midwestern U.S.—the area primarily encompassing the Great Lakes region—making this the most heavily represented area in the survey. The two coasts are also well represented—from the Northeast, which encompasses New England and New York (17 percent), to the Pacific region, extending from Washington state to southern California (13 percent). Another 12 percent of respondents are based in the Southeast, which includes the region extending from Virginia to Florida. About one out of 10 respondents comes from Canada.

## IN WHICH REGION ARE YOU LOCATED?



Small, focused teams continue to be the norm for BI/DW projects, the survey shows. About 63 percent of respondents state that they operate within teams of 10 individuals or fewer. This number is unchanged from the previous survey. Another 16 percent report having teams of 11 to 20 individuals. At the high end, 10 percent report having teams with more than 50 participants.

## HOW MANY FULL-TIME STAFF MEMBERS ON YOUR TEAM ARE DEVOTED TO BI/DW TASKS?

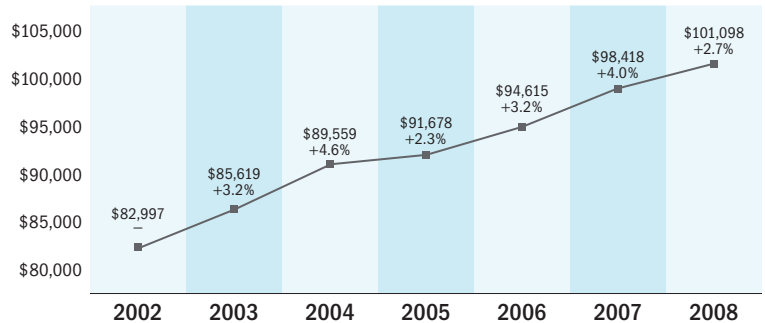


## COMPENSATION

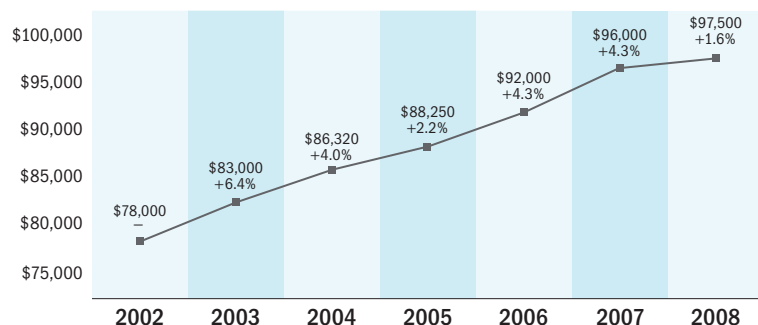
### Salary Trends

For the first time, the average base salary for BI/DW professionals has crested the \$100,000 mark, the survey finds. In 2008, average salaries for full-time BI/DW professionals in North America rose to \$101,098, up from \$98,418 in the 2007 survey. The pace of salary growth—just shy of 3 percent—has slowed somewhat from previous years, which is no surprise given the current economic slowdown. Last year, for example, increases averaged 4 percent from the prior year. In the 2006 data, overall average increases topped 3 percent. Average base salaries for BI/DW professionals have risen almost 22 percent since this survey series was first launched in 2002—growing at an average clip of about 3.4 percent a year.

## AVERAGE (MEAN) SALARIES



**MEDIAN SALARIES**



The rate of increases for BI/DW professionals in 2008 may be somewhat higher than those of IT positions overall. For example, the 2008 salary survey conducted among readers of *Enterprise Strategies*, published by 1105 Media, found that average increases among IT management and line positions averaged about 2 percent across the board.

**AVERAGE SALARIES—FULL-TIME EMPLOYEES VERSUS CONTRACTORS**

	Average Salary 2008	Respondents
Full-time employees	\$99,784	96%
Contractors/consultants*	\$131,189	4%

\*Independent contractors or professionals affiliated with contracting/consulting firms

This year, the survey also broke out the base salaries of professionals employed as full-time employees within organizations, versus those affiliated with contracting and consulting firms or working as independent contractors or consultants. BI/DW professionals employed on a full-time basis made just under \$100,000, while those working in a consulting or contracting capacity averaged more than \$131,000. While the compensation of independent professionals is substantially more, it should be remembered that they also are required to pay for their own benefits, full Social Security taxes, and equipment. All base salaries reported throughout this report reflect both full-time employee and contractors' salary ranges.

**AVERAGE SALARY CHANGES**

	2008	2007	2006	2005	2004
Decrease	3%	3%	2%	3%	4%
No change	8%	8%	7%	11%	12%
1-3%	38%	37%	41%	43%	42%
4-5%	23%	22%	21%	18%	18%
6-10%	17%	19%	20%	17%	17%
11-20%	8%	7%	7%	6%	5%
21% or more	2%	4%	2%	2%	1%

The survey also measured personal experiences with base salary increases. For the most part, respondents reported they saw increases ranging up to 5 percent over the past year. Three percent reported that their salaries had actually been cut, a percentage relatively unchanged over previous surveys in this series. More than a third, 36 percent, reported that their own increases topped that of their organizations overall—reflecting the highly perceived value being delivered through BI/DW solutions.

**DID YOUR 2008 BASE SALARY INCREASE BY MORE THAN THE ORGANIZATION'S STANDARD WAGE INCREASE?**

	2008	2007	2006
Yes	36%	36%	35%
No	39%	37%	39%
Stayed the same	10%	12%	12%
Not sure	15%	14%	14%

There are good reasons for BI's reputation as a lucrative profession. Six-figure incomes are more common in BI than in other segments of IT, and BI has a higher rate of pay increase than other IT segments.

## Bonus Trends

One of the most significant trends in BI compensation is the movement toward bonuses. When the TDWI salary survey series launched in 2002, the survey found that 53 percent of respondents were receiving bonuses. This has increased fairly steadily over the years, leading to 71 percent in the most recent survey, which is the highest level recorded by this report series. Most of these bonuses were awarded on the basis of performance—and were almost equally divided between individual achievement and company goals.

The news is mixed concerning bonuses. The number of BI professionals receiving bonuses has increased dramatically, which is good for the field in general. But the average dollar value of bonuses has remained almost flat for years, despite the appreciable inflation occurring during the same time period.

Average bonuses returned to peaks seen during 2006, the survey finds. This past year, the average bonus awarded to respondents was \$12,605—up by 7 percent from the previous survey. This comes close to the peak of \$12,891 seen in 2006. In addition, the percentage of bonus recipients receiving more than \$10,000 in bonuses rose slightly to 39 percent, up from 36 percent in the previous salary survey.

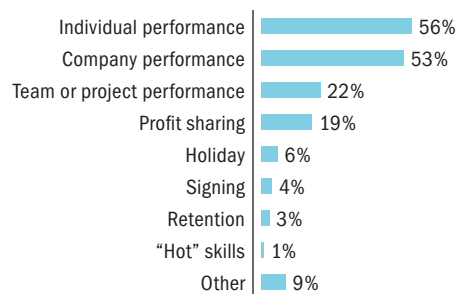
The percentage of respondents receiving options remained at a low point seen in the survey series—about 20 percent. Most of the job titles seen in this survey are at too low of a level to qualify for options in the average firm.

About one out of 10 professionals in this survey also report holding a second job to supplement their incomes. This is relatively low compared to previous surveys in this series—for example, in 2002, twice as many respondents, 20 percent, reported having a second job.

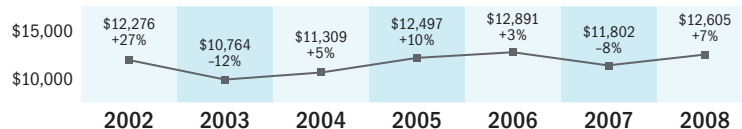
### RESPONDENTS RECEIVING BONUSES

	Yes	No
2008	71%	29%
2007	66%	34%
2006	66%	34%
2005	60%	40%
2004	56%	44%
2003	55%	45%
2002	53%	47%

### TYPES OF BONUSES



### AVERAGE BONUSES



### OPTIONS AND MOONLIGHTING

	2008	2007	2006	2005	2004	2003	2002
Receiving options	20%	20%	24%	23%	26%	27%	26%
Moonlighting	10%	10%	9%	15%	12%	13%	20%



TOP SALARIES AND BONUSES BY KEY ROLES

Role	2008	2007	2006	Change*	Receiving Bonus*	Average Bonus*
BI Director	\$131,288	\$125,907	\$118,794	+4.3%	82%	\$25,617
Business Sponsor	\$125,412	\$119,315	\$122,087	+5.1%	78%	\$24,977
Lead Information Architect	\$113,563	\$107,591	\$104,939	+5.5%	75%	\$13,510
BI Program Manager	\$110,483	\$103,890	\$100,084	+6.3%	75%	\$15,100
Subject Matter Expert	\$108,079	**	**	**	84%	\$15,946
Technical Architect/Systems Analyst	\$99,699	\$101,618	\$91,756	-1.9%	60%	\$8,312
BI Project Manager	\$97,756	\$98,566	\$93,145	<-1%	74%	\$9,426
Data Acquisition (ETL) Architect/Developer	\$90,991	\$88,747	\$84,340	+2.5%	65%	\$6,841
Data Warehouse Administrator	\$90,904	\$86,574	\$84,968	+5.0%	63%	\$7,992
Decision Support (BI) Architect/Developer	\$90,344	\$85,768	\$90,477	+5.3%	66%	\$7,916
Business Requirements Analyst	\$84,788	\$81,112	\$82,138	+4.5%	64%	\$6,800
Data Analyst/Modeler	\$82,275	\$82,614	\$80,730	<-1%	70%	\$6,107
Database Administrator	\$79,900	\$87,059	\$89,282	-8.2%	46%	\$9,420

\*2008 data

\*\*Data not available for this position from previous surveys

Salary Breakdowns

BI directors, who are charged with shaping BI strategy, architecture, and budgets, continued to be the top earners among professional categories covered in this survey. In 2008, a typical BI director made \$131,288, reflecting an increase of more than 4 percent over the previous year. More than eight out of 10 BI directors received bonuses, averaging more than \$25,000, which is the largest average bonus. With bonuses, the level of total compensation for BI directors potentially totals almost \$157,000.

Business sponsors are the second-leading category, averaging \$125,412 a year, the survey finds. This level of income is up 5 percent over the previous survey. Business sponsors also saw hefty bonuses in 2008 averaging close to \$25,000—the second highest among the positions covered in the survey.

BI program managers saw the most significant salary growth between 2007 and 2008, the survey shows. Base salaries for these professionals grew by more than 6 percent during this time. Lead information architects' average base salaries grew at a 5.5 percent pace, followed by decision support architects or developers at 5.3 percent. Data warehouse administrators also saw salary growth, with a 5 percent gain.

Database administrators (DBAs) lost the most ground in 2008. In the survey, average salaries for DBAs fell by more than 8 percent to about \$80,000 a year. Fewer than half of DBAs saw bonuses over the past year. In related jobs, the average salaries of technical architects and systems analysts decreased by almost 2 percent over the past year.

The continuing ascendancy of BI directors and business sponsors and the weak salary performance for DBAs reflect the emphasis on moving data professionals into positions in which they can deliver business value from data management systems, and movement away from base-level technical tasks that DBAs have historically been charged with.

Salary trends reflect the emphasis on moving data professionals into positions in which they can deliver business value.

BI/DW professionals working within the pharmaceutical industry have surpassed those in consulting and professional services as the leading industry in terms of base compensation. Respondents at pharmaceutical firms reported average base salaries of \$117,000, up 13 percent over the previous year's survey. Those at consulting and professional services firms averaged more than \$111,000, but only saw an increase of just over 1 percent. Respondents at software and Internet-based firms report the second-highest gains over the past year, with increases of close to 8 percent.

Pay increases in the aforementioned industries far outpaced those of financial services, which grew less than 3 percent. Obviously, 2008 was a harsh year for the financial services industry, which suffered through a severe mortgage and credit crisis, and now faces a dramatic restructuring and increased regulation. Even so, financial services still ranked fifth by average salary, and will no doubt recover and continue to be a leading industry for BI/DW activity.

The industry showing the largest declines in salary rates was the retail/wholesale and distribution sector, which saw average pay drop by more than 4 percent, perhaps a reflection of the tough economic environment for retailers in 2008.

There is a significant disparity between the average salaries paid by large organizations and their smaller counterparts. The largest organizations in the survey (with \$50 billion or more in annual revenues) pay an average of 14 percent more than their smallest counterparts, those firms with less than \$100 million in annual revenues. However, salary growth was tepid or nonexistent at both the extreme ends of the scale. Respondents in the largest organizations made close to an average of \$112,000 in base salary in 2008, essentially unchanged from the previous year, while those in the smallest firms saw salaries slip by almost 5 percent. The greatest gains were seen between those two extremes, namely among respondents working in midsize to larger firms with annual revenues between \$100 million and \$5 billion.

The greatest average salary gains were reported among respondents working in midsize to larger firms.

### AVERAGE SALARY BY INDUSTRY

	2008	2007	2006	Change*
Pharmaceuticals	\$117,324	\$103,675	\$106,194	+13.2%
Consulting/professional services	\$111,661	\$110,170	\$103,478	+1.4%
Software/Internet	\$107,189	\$99,612	\$97,803	+7.6%
Government (federal)	\$105,345	**	**	**
Financial services	\$105,131	\$102,392	\$93,714	+2.7%
Media/entertainment/publishing	\$102,841	**	**	**
Computer manufacturing	\$102,540	\$100,345	\$114,223	+2.2%
Manufacturing (non-computer)	\$100,353	\$95,623	\$94,716	+4.9%
Telecommunications	\$97,881	\$92,391	\$90,102	+5.9%
Healthcare	\$97,747	\$98,396	\$91,610	<-1%
Retail/wholesale/distribution	\$92,458	\$96,730	\$97,235	-4.4%
Insurance	\$89,846	\$88,402	\$88,213	+1.6%
Education	\$85,326	\$85,140	\$86,601	<+1%
Government (state/local)	\$82,274	\$81,987	\$73,626	<+1%

\*2008 data

\*\*Data not available for these industries from previous surveys

### AVERAGE SALARY BY COMPANY REVENUES

	2008	2007	2006
Less than \$100 million	\$97,702	\$102,757	\$97,817
\$100-\$500 million	\$96,635	\$93,932	\$89,541
\$500 million-\$1 billion	\$97,476	\$93,660	\$92,396
\$1-\$5 billion	\$100,853	\$96,589	\$94,433
\$5-\$10 billion	\$103,410	\$102,142	\$99,973
\$10-\$50 billion	\$106,619	\$106,992	\$100,007
\$50 billion or more	\$111,818	\$111,799	\$106,960

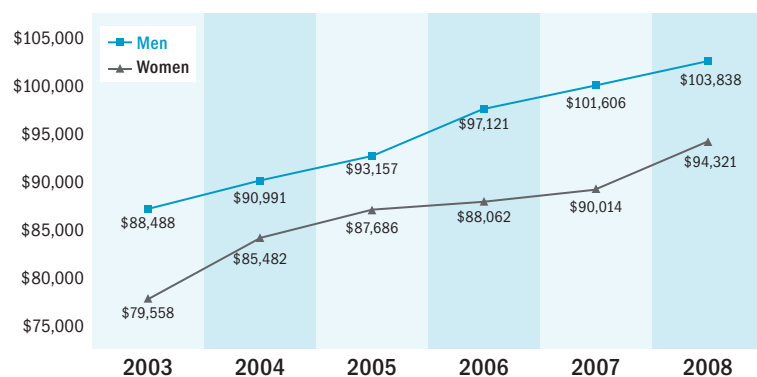
**AVERAGE SALARY BY REGION**

	2008	2007	2006
Pacific	\$110,795	\$104,980	\$99,966
Northeast	\$108,035	\$104,251	\$100,541
Mid-Atlantic	\$105,787	\$105,340	\$104,499
Southwest	\$104,310	\$101,193	\$98,302
Rocky Mountains	\$100,951	\$99,839	\$91,703
Southeast	\$99,655	\$96,374	\$94,486
Midwest	\$95,735	\$93,228	\$90,662
South	\$98,706	\$90,760	\$89,756
Central Plains	\$87,142	\$85,036	\$84,856
Canada	\$89,278	\$89,188	\$75,776

By region, the western U.S. dominates in terms of base salaries, the TDWI survey finds. Respondents in the Pacific states experienced significant gains in their average salaries, surpassing the Mid-Atlantic states, which led last year. BI/DW professionals on the West Coast saw average base salaries close to \$111,000 in 2008, up 5 percent over the previous year. Respondents in the northeastern states followed with an average of \$108,000—a more modest gain of about 4 percent. Salaries in the Northeast also surpassed Mid-Atlantic averages—which were essentially unchanged from year to year.

The average base salary for respondents at Canadian companies was just over \$89,000 USD, substantially lower than their U.S. counterparts.

**AVERAGE SALARY BY GENDER**



As has been the case since 2003, the first time the gender category was covered in TDWI's salary survey, salaries for men in the profession continued to exceed those of women, although the gap is narrowing. The average salary for a male professional jumped 2 percent to \$103,838, while salaries for female professionals in the BI/DW field grew by about 5 percent. Currently, the gap between men and women in the field is close to \$10,000, down from \$11,600 in the previous survey, but still far more than the gap of \$5,500 seen in the 2005 survey. However, women saw significant increases in bonus levels that—for the first time in this survey series—are almost equal to those of men. Female professionals earned an average bonus of \$12,505 in 2008, almost the same as that of male professionals.

**AVERAGE BONUS AND BONUS DISTRIBUTION BY GENDER**

	2008	2007	2006	2005	Receiving Bonus*
Men	\$12,644	\$12,545	\$13,954	\$13,175	67%
Women	\$12,505	\$9,628	\$9,982	\$10,640	63%

\*2008 data

Salaries for men in the profession continued to exceed those of women, although the gap is narrowing. Bonus levels—for the first time in this survey series—are almost equal.

**AVERAGE SALARY BY AGE**

	2008	2007	2006	2005	2004	2003
25 or younger	\$62,297	\$66,159	\$53,289	\$61,093	\$50,567	\$58,094
26-35	\$90,291	\$87,729	\$86,548	\$82,572	\$80,939	\$77,686
36-45	\$104,474	\$103,420	\$96,739	\$94,283	\$93,799	\$90,157
46-55	\$109,055	\$104,612	\$101,400	\$95,600	\$91,972	\$89,092
56-65	\$106,856	\$100,084	\$100,344	\$98,213	\$97,391	\$91,407

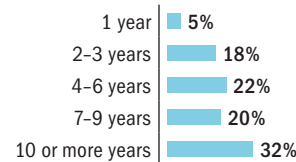
Age has its rewards in the BI/DW profession—up to a point. Overall, the survey finds average salaries increase up to 75 percent between entry-level positions (staffed by professionals 25 years or younger) to more experienced individuals in their 50s. Professionals between 46 and 55 were the highest earners in 2008, averaging more than \$109,000. However, averages drop off a little bit for professionals over 55 to less than \$107,000.

Hands-on experience with BI/DW also pays off, TDWI salary survey data shows. A professional with at least a decade's worth of experience in the industry sees about 46 percent more in his or her paycheck than those just starting out with BI/DW. Those in their first year of BI/DW earn slightly more than \$80,500 in base salary, a figure that grows to almost \$118,000 a year for their more experienced counterparts.

## AVERAGE SALARY BY YEARS OF BI/DW EXPERIENCE

	2008	2007	2006	2005	2004
1 year	\$80,570	\$85,538	\$82,548	\$83,443	\$90,702
2-3 years	\$88,385	\$86,984	\$85,176	\$81,346	\$81,447
4-6 years	\$95,172	\$91,708	\$89,960	\$87,564	\$83,744
7-9 years	\$98,734	\$97,149	\$101,019	\$93,198	\$93,802
10 or more years	\$117,638	\$114,056	\$105,988	\$104,735	\$107,024

## AVERAGE YEARS OF BI/DW EXPERIENCE

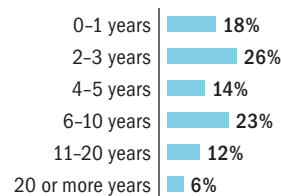


There is also somewhat of a premium for those professionals who remain with a single company for a number of years, versus those who move between employers. However, as the survey data shows, companies place a greater value on skills and performance than on seniority when it comes to BI/DW. For example, a professional who just joined an organization within the past year only makes about 4 percent less than someone who has been at the organization for two decades or more.

## AVERAGE SALARY BY YEARS AT CURRENT COMPANY

	2008	2007	2006	2005
0-1 years	\$99,505	\$98,168	\$95,308	\$93,670
2-3 years	\$98,338	\$97,118	\$90,814	\$90,361
4-5 years	\$102,332	\$98,848	\$94,043	\$89,509
6-10 years	\$98,991	\$96,614	\$93,040	\$91,925
11-20 years	\$98,856	\$103,545	\$96,958	\$94,152
20 or more years	\$103,451	\$103,981	\$104,430	\$94,620

## AVERAGE YEARS AT CURRENT COMPANY



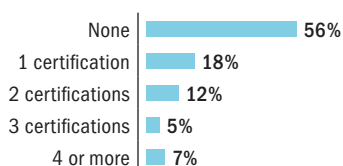
Companies place a greater value on skills and performance than on seniority when it comes to BI/DW.

**AVERAGE SALARY BY CERTIFICATION**

	2008	2007	2006	2005
No certifications	\$98,361	\$95,741	\$93,687	\$90,769
1 certification	\$105,141	\$100,141	\$96,320	\$91,449
2 certifications	\$104,526	\$105,122	\$95,437	\$95,079
3 certifications	\$103,033	\$101,523	\$98,102	\$93,615
4 or more	\$104,777	\$97,816	\$92,702	\$90,145

Professional certification has its rewards, the survey demonstrates. While those professionals with no BI/DW certifications had average base salaries of about \$98,400, adding a certification can add \$7,000. However, multiple certifications beyond two have no meaningful impact on further salary growth, the survey shows.

**NUMBER OF CERTIFICATIONS**



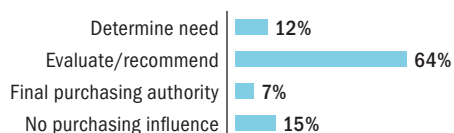
Professionals with BI or DW certifications make \$7,000 more on average.

**AVERAGE SALARY BY PURCHASING AUTHORITY**

	2008	2007	2006	2005	2004
Determine need	\$91,790	\$94,018	\$89,872	\$89,787	\$80,937
Evaluate/recommend	\$101,389	\$100,007	\$96,313	\$92,641	\$90,851
Final purchasing authority	\$131,976	\$129,443	\$117,719	\$114,553	\$115,791
No purchasing influence	\$85,743	\$85,278	\$83,119	\$79,078	\$75,689

The survey finds a direct and significant correlation between levels of influence over BI/DW purchasing and compensation. Respondents who have final purchasing authority over solutions (most likely upper-level or senior managers) report average incomes of almost \$132,000. By contrast, those simply tasked with determining needs in the BI/DW area earn close to \$92,000 a year on average, and those with no purchasing influence average close to \$86,000 a year.

**PURCHASING AUTHORITY**



**AVERAGE SALARY BY BI/DW MATURITY**

	2008	2007	2006	2005
Beginner—We're getting serious about BI for the first time	\$95,478	\$96,576	\$89,961	\$87,061
Intermediate—We have deployed a data warehouse and are looking to add more value	\$99,459	*	*	*
Advanced—We manage a relatively mature BI environment that delivers significant business value	\$103,287	\$101,753	\$95,589	\$91,047

The level of BI maturity also has an effect on salary levels, the TDWI survey confirms. For example, those respondents in "advanced" BI environments—delivering a relatively mature BI environment that delivers significant business value—average more than \$103,000 a year. In contrast, those in the beginning stages of BI report average annual salaries of about \$95,500.

\*2005–2007 surveys had varying definitions for "intermediate" BI

## Job Satisfaction

A majority of survey respondents (51 percent) rate their job satisfaction as “high” to “very high.” Likewise, 39 percent report moderate satisfaction. Conversely, only 9 percent express dissatisfaction with their current jobs. This is almost identical to last year’s results, and shows that the vast majority of BI/DW professionals are happy in their work.

Along with general job satisfaction, there is a high degree of satisfaction with compensation levels, the TDWI survey finds. A majority of respondents, 53 percent, feel they are “fairly” compensated, up from 51 percent in the last survey, and significantly higher than the results in 2005, when only 41 percent agreed that they were fairly compensated.

Perhaps as a direct result of the turbulent economic conditions during 2008, fewer BI/DW professionals are actively job-hunting. This also suggests that the BI/DW profession was not hit by layoffs or outsourcing as the economy slowed down. In the current survey, 13 percent said they were looking for a new job outside their companies, down from 15 percent a year ago and 18 percent in 2004, the first time this question was asked. In line with a greater tendency for BI/DW professionals to stay put over the past year, only 12 percent reported that they had taken a position at a new company over the past 12 months, down from 16 percent the year before.

For the most part, respondents are satisfied with their jobs and compensation and feel secure.

### HOW WOULD YOU RATE YOUR SATISFACTION IN YOUR CURRENT POSITION?

	2008	2007	2006	2005	2004
Very high	11%	12%	10%	8%	11%
High	40%	40%	39%	35%	37%
Moderate	39%	39%	41%	45%	44%
Low	7%	8%	7%	10%	6%
Very low	2%	1%	2%	3%	2%

### ARE YOU FAIRLY COMPENSATED?

	2008	2007	2006	2005	2004
Yes	53%	51%	50%	41%	43%
No	32%	34%	32%	39%	36%
Not sure	15%	16%	18%	20%	22%

### ARE YOU LOOKING FOR A NEW JOB OUTSIDE YOUR COMPANY?

	2008	2007	2006	2005	2004
Yes, definitely	13%	15%	14%	15%	18%
Somewhat, but not seriously	43%	45%	42%	45%	43%
No	44%	40%	44%	39%	39%

### DID YOU TAKE A POSITION AT A NEW COMPANY IN THE PAST 12 MONTHS?

	2008	2007	2006
Yes	12%	16%	16%
No	88%	84%	83%

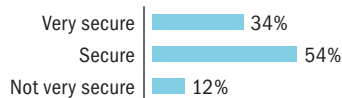
**BESIDE SALARY, WHAT ARE THE TOP FIVE CONSIDERATIONS FOR A NEW JOB?**



Based on responses of “1” or “2” on a 1-to-5 scale in which 1 was a top consideration and 5 was a low consideration.

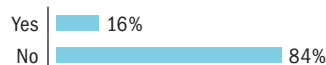
A number of factors weigh into job satisfaction, of course. Respondents were most likely to cite a desirable location as important to choosing a new job. Forty-four percent rated location as their most important consideration, followed by challenging work, opportunities to learn new skills, and scheduling.

**HOW SECURE DO YOU FEEL IN YOUR JOB?**

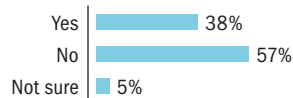


Finally, for the most part, not only are respondents generally satisfied with their jobs and compensation, but most also feel secure that their job will be around for some time to come, and will not be downsized or outsourced. Only 12 percent expressed insecurity about their jobs, while 16 percent were concerned with the prospect that their jobs could be outsourced. About two out of five respondents’ companies, in fact, already outsource at least some of their BI/DW projects to an outside service provider.

**ARE YOU CONCERNED YOU WILL LOSE YOUR JOB TO OUTSOURCING?**



**HAS YOUR COMPANY OUTSOURCED ANY BI/DW FUNCTIONS TO AN OFFSHORE OR ONSHORE SERVICE PROVIDER?**



## ROLES AND RESPONSIBILITIES

### Primary Roles

BI program manager was the job title, role, or responsibility most often cited by respondents to this year's survey. Close to one out of eight assumed this as their primary role, which could encompass the management of a range of BI efforts across the enterprise. There was also a notable increase in lead information architects and data acquisition architect roles. As organizations increase the sophistication of their BI/DW efforts and seek to reach across the enterprise, there's an acute need for architectural skills. And data integration work (both inside and outside data warehousing) is currently exploding, thus requiring more data acquisition specialists. Organizations recognize that effective BI/DW efforts need to be planned out and coordinated with business requirements.

### Secondary Roles

Most respondents' jobs include multiple responsibilities or roles in support of their organizations' BI/DW efforts. Core technical skills often come into play in secondary roles as well. On average, respondents have assumed more than three roles. Close to two out of three respondents, in fact, say they play three or more roles as part of their primary jobs. Such roles are likely to include those of data analyst and data modeler (cited by 42 percent), decision support architect or developer (33 percent), and technical architect or systems analyst (32 percent). Another important up-and-coming role is that of subject matter expert, cited by 32 percent (up from 29.5 percent in the previous year's survey). This also demonstrates the evolution of BI/DW functions toward directly addressing business requirements.

The remainder of this report dives into the details of the top 10 primary roles, as determined by the survey, in the order listed in the table "Primary and Secondary Roles."

#### PRIMARY AND SECONDARY ROLES

	Primary Role	Secondary Role
BI Program Manager	12%	21%
Lead Information Architect	10%	27%
Data Acquisition (ETL) Architect/Developer	10%	30%
Decision Support (BI) Architect/Developer	10%	33%
BI Director	9%	14%
Data Analyst/Data Modeler	9%	42%
BI Project Manager	8%	25%
Technical Architect/Systems Analyst	7%	32%
Business Requirements Analyst	6%	32%
Business Sponsor/Driver	4%	11%
Subject Matter Expert	3%	32%
Data Warehouse Administrator	2%	16%
Database Administrator	2%	8%
Business User	1%	11%
BI Support and Service	1%	19%
Data Owner/Steward	1%	11%
Data Quality Analyst	<1%	20%
Data Administrator/Metadata Manager	<1%	12%
BI Trainer	<1%	13%

#### NUMBER OF SECONDARY ROLES

	2008	2007	2006
No secondary roles	3%	3%	2%
1 role	13%	12%	9%
2 roles	22%	23%	25%
3 roles	30%	30%	31%
4 roles	13%	14%	14%
5 roles	8%	7%	9%
6 roles	4%	3%	3%
7 or more roles	8%	7%	7%
Average number of roles	3.37	3.27	3.27



# BI Program Manager

## GENERAL DESCRIPTION

- Oversees the management and direction of multiple data warehousing projects
- Aligns data warehousing projects with business strategy
- Works with BI director as a liaison between business sponsors and executives
- Works with BI director to secure and maintain funding
- Manages BI stewards and steering committees

## KEY RESPONSIBILITIES

- Staffs project teams
- Facilitates the prioritization of projects and requirements among competing business interests
- Coordinates with various business and technical groups whose support is needed to build or deploy data warehouses
- Establishes standards for technology and business processes
- Coordinates and aligns multiple data warehousing projects
- Measures results

## KEY SKILLS








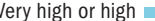
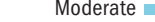








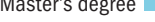
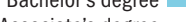













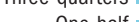



- Knowledge of business
- Prior data warehousing experience
- Communications and marketing
- Managing multiple project teams
- Managing multiple, complex enterprise projects
- Strategic and financial planning

## KEY DELIVERABLES

- Strategic plans
- Steering committee priorities and plans
- Funding requests
- Corporate budgets
- Return on investment reports

## COMMON SECONDARY ROLES

- BI project manager (41%)
- Subject matter expert (30%)
- Lead information architect (23%)
- Business requirements analyst (21%)
- Average number of secondary roles: 2.9

<b>Annual salary</b>	\$110,483
<b>Bonuses</b>	\$15,100
<b>Average salary change from 2008</b>	+6.3%
<b>Age</b>	41.8 years
<b>Gender</b>	Male 75%  25% Female
<b>BI experience</b>	8.3 years
<b>Number of certifications</b>	1.9
<b>Years at company</b>	6.6 years
<b>Percent getting a bonus</b>	Yes  75%
<b>Types of bonuses</b>	Individual  66% Company  59% Team  24% Profit sharing  20% Retention  3%
<b>Job satisfaction</b>	Very high or high  51% Moderate  40% Low or very low  9%
<b>Fairly compensated?</b>	Yes  55% No  31% Unsure  13%
<b>Looking for new job?</b>	Yes  15% Somewhat  40% No  45%
<b>Level of education</b>	PhD  3% Master's degree  39% Bachelor's degree  50% Associate's degree  8% High school  2%
<b>Outside income?</b>	Yes  2%
<b>Options?</b>	Yes  28%
<b>Purchasing authority</b>	Evaluate/recommend  71% Determine need  9% Final purchasing authority  15% None  5%
<b>Professional background</b>	Technical  73% Business  19% Academic  5% Other  4%
<b>Time spent on BI projects</b>	Full  69% Three-quarters  16% One-half  9% One-quarter  6% None  1%

# Lead Information Architect

## GENERAL DESCRIPTION

- Coordinates the work of technical, data, ETL, and BI architects
- Oversees the design of the data and technical architecture for the data warehouse
- Oversees the development of logical and physical data models, ETL scripts, metadata definitions and models, queries and reports, schedules, work processes, and maintenance procedures
- Ensures proper backup and recovery processes
- Supervises selection of hardware, storage, and software products

## KEY RESPONSIBILITIES

- Creates a robust, sustainable architecture that supports requirements and provides for expansion given budgetary constraints and availability of data and skilled resources
- Evaluates and selects various data warehousing tools and components
- Coordinates multiple architects responsible for development, integration, administration, and evolution of the data warehouse

## KEY SKILLS




















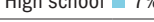














- Prior experience building data warehouses
- Data modeling, database administration, and performance tuning
- SQL, ETL, OLAP
- Operating platforms
- Metadata management
- Use-case analysis
- Conceptual and analytic skills
- Knowledge of business domain
- Ability to balance theory and practical reality

## KEY DELIVERABLES

- Architecture and strategy documentation
- Use-case analysis report
- Capacity planning analysis
- Job development guidelines
- Administrative management plan

## COMMON SECONDARY ROLES

- Data analyst/data modeler (60%)
- Technical architect/systems analyst (49%)
- Decision support (BI) architect/developer (48%)
- Data acquisition (ETL) architect/developer (47%)
- Average number of secondary roles: 4.1

<b>Annual salary</b>	\$113,563
<b>Bonuses</b>	\$13,510
<b>Average salary change from 2008</b>	+5.5%
<b>Age</b>	43.6 years
<b>Gender</b>	Male 79%  21% Female
<b>BI experience</b>	9.4 years
<b>Number of certifications</b>	2.4
<b>Years at company</b>	6.3 years
<b>Percent getting a bonus</b>	Yes  75%
<b>Types of bonuses</b>	Individual  54% Company  60% Team  24% Profit sharing  28%
<b>Job satisfaction</b>	Very high or high  54% Moderate  38% Low or very low  8%
<b>Fairly compensated?</b>	Yes  61% No  29% Unsure  10%
<b>Looking for new job?</b>	Yes  17% Somewhat  42% No  41%
<b>Level of education</b>	PhD  5% Master's degree  29% Bachelor's degree  53% Associate's degree  6% High school  7%
<b>Outside income?</b>	Yes  10%
<b>Options?</b>	Yes  20%
<b>Purchasing authority</b>	Evaluate/recommend  90% Determine need  8% Final purchasing authority  1% None  1%
<b>Professional background</b>	Technical  88% Business  5% Academic  7% Other -
<b>Time spent on BI projects</b>	Full  59% Three-quarters  13% One-half  11% One-quarter  13% None  4%

# Data Acquisition (ETL) Architect/Developer

## GENERAL DESCRIPTION

- Responsible for the scripts required to extract, transform, clean, and move data and metadata so they can be loaded into a data warehouse, data mart, or operational data store

## KEY RESPONSIBILITIES

Data acquisition managers oversee a team of ETL developers who have the following responsibilities:

- Work with business requirements analyst to identify and understand source data systems
- Map source system data to data warehouse models
- Develop and test extraction, transformation, and load (ETL) processes
- Define and capture metadata and rules associated with ETL processes
- Adapt ETL processes to accommodate changes in source systems and new business user requirements

## KEY SKILLS



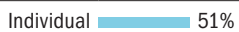


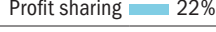













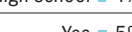


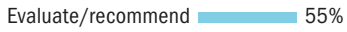
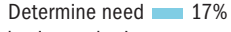


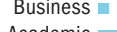
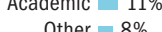


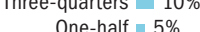
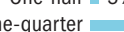


- Understanding of source and target data structures, ETL processes, and products
- Knowledge of 3GL/4GL programming languages and ETL products
- Strong problem-solving and metadata skills

## KEY DELIVERABLES

- Completes mapping and transformation programs
- Schedules extraction and load processes
- ETL metadata documented and maintained in metadata repository
- Database loadable files

## COMMON SECONDARY ROLES

- Data analyst/data modeler (50%)  
 Technical architect/systems analyst (40%)  
 Decision support (BI tools) architect/developer (34%)  
 Data warehouse administrator (28%)
- Average number of secondary roles: 3.3

<b>Annual salary</b>	\$90,991
<b>Bonuses</b>	\$6,841
<b>Average salary change from 2008</b>	+2.5%
<b>Age</b>	38.6 years
<b>Gender</b>	Male 76%  24% Female
<b>BI experience</b>	6.4 years
<b>Number of certifications</b>	2.4
<b>Years at company</b>	5.9 years
<b>Percent getting a bonus</b>	Yes  65%
<b>Types of bonuses</b>	Individual  51% Company  49% Team  15% Profit sharing  22%
<b>Job satisfaction</b>	Very high or high  42% Moderate  45% Low or very low  13%
<b>Fairly compensated?</b>	Yes  50% No  29% Unsure  21%
<b>Looking for new job?</b>	Yes  17% Somewhat  41% No  42%
<b>Level of education</b>	PhD  1% Master's degree  26% Bachelor's degree  62% Associate's degree  7% High school  4%
<b>Outside income?</b>	Yes  5%
<b>Options?</b>	Yes  17%
<b>Purchasing authority</b>	Evaluate/recommend  55% Determine need  17% Final purchasing authority - None  29%
<b>Professional background</b>	Technical  75% Business  6% Academic  11% Other  8%
<b>Time spent on BI projects</b>	Full  80% Three-quarters  10% One-half  5% One-quarter  4% None  1%

# Decision Support (BI) Architect/Developer

## GENERAL DESCRIPTION

- Works with end users and business analysts to ensure tight fit between BI environment and business requirements
- Designs and manages the BI tools and applications environment
- Configures BI tools, develops the semantic layer and metadata, and creates reports and report definitions
- Creates and delivers end-user training and documentation and provides second-line support to power users who develop reports on behalf of their departmental colleagues

## KEY RESPONSIBILITIES

- Installs, configures, deploys, and tunes BI tools and analytic servers
- Troubleshoots BI tool problems and tunes for performance
- Develops multidimensional semantic layer and BI query objects for end users
- Creates reports and report templates
- Helps business users select the appropriate BI tool(s)
- Develops and manages BI training, documentation, and help desk capabilities

## KEY SKILLS
















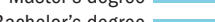
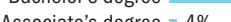














- Translation of business questions and requirements into reports, views, and BI query objects
- Knowledge of BI tool architectures, functions, and features
- Understanding of SQL and relational and multidimensional designs
- Strong problem-solving and metadata skills
- Understands BI tool architecture, functions, features
- Customizes BI tools to meet user needs

## KEY DELIVERABLES

- Standardizes use of BI tools and semantic layers throughout the organization
- Provides repository of best practices on how to install, configure, and use BI tools for more productivity
- Reports, templates, and analytical views
- BI training, documentation, and help desk support

## COMMON SECONDARY ROLES

- Data analyst/data modeler (47%)
- BI support/service (42%)
- Technical architect/systems analyst (39%)
- Data acquisition (ETL) manager/developer (38%)
- Average number of secondary roles: 3.7

<b>Annual salary</b>	\$90,344
<b>Bonuses</b>	\$7,916
<b>Average salary change from 2008</b>	+5.3%
<b>Age</b>	37.4 years
<b>Gender</b>	Male 76%  24% Female
<b>BI experience</b>	6.7 years
<b>Number of certifications</b>	2.3
<b>Years at company</b>	5.2 years
<b>Percent getting a bonus</b>	Yes  66%
<b>Types of bonuses</b>	Individual  50% Company  44% Team  11% Profit sharing  18%
<b>Job satisfaction</b>	Very high or high  47% Moderate  42% Low or very low  10%
<b>Fairly compensated?</b>	Yes  44% No  37% Unsure  19%
<b>Looking for new job?</b>	Yes  16% Somewhat  47% No  36%
<b>Level of education</b>	PhD - Master's degree  42% Bachelor's degree  51% Associate's degree  4% High school  3%
<b>Outside income?</b>	Yes  13%
<b>Options?</b>	Yes  18%
<b>Purchasing authority</b>	Evaluate/recommend  66% Determine need  18% Final purchasing authority - None  17%
<b>Professional background</b>	Technical  65% Business  15% Academic  9% Other  10%
<b>Time spent on BI projects</b>	Full  88% Three-quarters  8% One-half  4% One-quarter - None -

# BI Director

## GENERAL DESCRIPTION

- Owns or directly shapes the BI strategy, architecture, and budget
- Oversees program and project managers, architects, and specialists
- Serves as liaison between the business and the BI team
- Develops marketing and communications program for the BI program
- Communicates benefits of the BI environment to executives and users

## KEY RESPONSIBILITIES

- Develops the vision and business case for the BI program
- Sells the BI program to executives and other managers
- Works with architects to create a high-level enterprise architecture to support a growing portfolio of BI applications
- Hires and oversees BI program and project managers and architects
- Interfaces with business sponsors and drivers and steering committees
- Meets business criteria for successful BI implementations

## KEY SKILLS






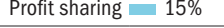











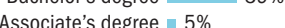
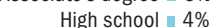
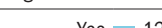


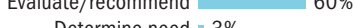
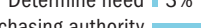
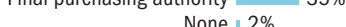






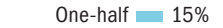


- Sales
- Marketing
- Communications
- Leadership
- Delegation
- Knowledge and design of data warehouses
- Flexibility, diplomacy, and problem-solving

## KEY DELIVERABLES

- BI funding
- BI strategy
- BI budget
- BI architecture
- BI team

## COMMON SECONDARY ROLES

- BI program manager (38%)
- Subject matter expert (35%)
- Lead information architect (29%)
- BI project manager (27%)
- Average number of secondary roles: 3.3

<b>Annual salary</b>	\$131,288
<b>Bonuses</b>	\$25,617
<b>Average salary change from 2008</b>	+4.3%
<b>Age</b>	43.7 years
<b>Gender</b>	Male 76%  24% Female
<b>BI experience</b>	9.4 years
<b>Number of certifications</b>	2.2
<b>Years at company</b>	6.0 years
<b>Percent getting a bonus</b>	Yes  82%
<b>Types of bonuses</b>	Individual  63% Company  65% Team  26% Profit sharing  15%
<b>Job satisfaction</b>	Very high or high  66% Moderate  27% Low or very low  7%
<b>Fairly compensated?</b>	Yes  64% No  24% Unsure  12%
<b>Looking for new job?</b>	Yes  13% Somewhat  39% No  48%
<b>Level of education</b>	PhD  5% Master's degree  46% Bachelor's degree  39% Associate's degree  5% High school  4%
<b>Outside income?</b>	Yes  12%
<b>Options?</b>	Yes  29%
<b>Purchasing authority</b>	Evaluate/recommend  60% Determine need  3% Final purchasing authority  35% None  2%
<b>Professional background</b>	Technical  60% Business  28% Academic  4% Other  8%
<b>Time spent on BI projects</b>	Full  56% Three-quarters  22% One-half  15% One-quarter  7% None -

# Data Analyst/Data Modeler

## GENERAL DESCRIPTION

- Develops, manages, and updates data models, including physical and logical models of the data warehouse, data mart, and staging area, and sometimes the operational data store and source systems

## KEY RESPONSIBILITIES

- Interviews business users to obtain data requirements for new analytic applications
- Designs conceptual and logical models for the data warehouse or data mart
- Communicates physical database designs to database administrator
- Evolves models to meet new and changing business requirements
- Develops process for capturing and maintaining metadata from all data warehousing components

## KEY SKILLS









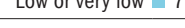













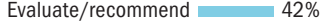
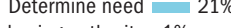
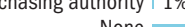




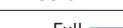

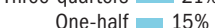



- Strong conceptual, communications, and technical skills
- Ability to translate business needs into technical solutions
- Strong relational and dimensional data modeling and database design skills

## KEY DELIVERABLES

- Source system recommendations
- Model management standards
- Logical and physical data models
- Meta model for metadata repository

## COMMON SECONDARY ROLES

- Data quality analyst (44%)
- Business requirements analyst (34%)
- Decision support (BI) architect/developer (22%)
- Data acquisition (ETL) architect or developer (20%)
- Technical architect or systems analyst (20%)
- Average number of secondary roles: 3.1

<b>Annual salary</b>	\$82,275
<b>Bonuses</b>	\$6,107
<b>Average salary change from 2008</b>	<-1%
<b>Age</b>	41.0 years
<b>Gender</b>	Male 54%  46% Female
<b>BI experience</b>	5.8 years
<b>Number of certifications</b>	2.5
<b>Years at company</b>	5.6 years
<b>Percent getting a bonus</b>	Yes  70%
<b>Types of bonuses</b>	Individual  49% Company  43% Team  16% Profit sharing  17%
<b>Job satisfaction</b>	Very high or high  51% Moderate  42% Low or very low  7%
<b>Fairly compensated?</b>	Yes  46% No  42% Unsure  12%
<b>Looking for new job?</b>	Yes  13% Somewhat  37% No  50%
<b>Level of education</b>	PhD  2% Master's degree  40% Bachelor's degree  48% Associate's degree  6% High school  4%
<b>Outside income?</b>	Yes  13%
<b>Options?</b>	Yes  20%
<b>Purchasing authority</b>	Evaluate/recommend  42% Determine need  21% Final purchasing authority  1% None  36%
<b>Professional background</b>	Technical  60% Business  22% Academic  15% Other  4%
<b>Time spent on BI projects</b>	Full  45% Three-quarters  21% One-half  15% One-quarter  12% None  7%

# BI Project Manager

## GENERAL DESCRIPTION

- Manages a single data warehousing project
- Develops budgets and plans
- Secures resources and personnel
- Manages a team of developers and contractors
- Prioritizes requirements, schedules tasks, communicates progress

## KEY RESPONSIBILITIES

- Develops plans and schedules
- Scopes project; manages scope changes
- Prioritizes requirements; manages expectations
- Establishes budgets
- Hires and manages personnel
- Communicates progress
- Coordinates training
- Measures ROI

## KEY SKILLS







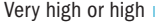









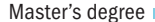
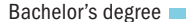
















- Project management
- Communication
- Leadership
- Decision making
- Delegation
- Knowledge and design of data warehouses
- Flexibility, diplomacy, and problem-solving

## KEY DELIVERABLES

- Project and resource plans
- Funding requests
- Success metrics
- Training plans
- Scope documentation
- Status reports
- Acceptance criteria

## COMMON SECONDARY ROLES

- Business requirements analyst (40%)
- Decision support (BI) architect or developer (32%)
- Data analyst/data modeler (28%)
- Lead information architect (28%)
- BI program manager (22%)
- Average number of secondary roles: 3.3

<b>Annual salary</b>	\$97,756
<b>Bonuses</b>	\$9,426
<b>Average salary change from 2008</b>	<-1%
<b>Age</b>	41.0 years
<b>Gender</b>	Male 78%  22% Female
<b>BI experience</b>	7.2 years
<b>Number of certifications</b>	2.6
<b>Years at company</b>	6.4 years
<b>Percent getting a bonus</b>	Yes  74%
<b>Types of bonuses</b>	Individual  53% Company  54% Team  26% Profit sharing  20%
<b>Job satisfaction</b>	Very high or high  50% Moderate  43% Low or very low  8%
<b>Fairly compensated?</b>	Yes  50% No  39% Unsure  12%
<b>Looking for new job?</b>	Yes  14% Somewhat  47% No  40%
<b>Level of education</b>	PhD  2% Master's degree  38% Bachelor's degree  51% Associate's degree  4% High school  5%
<b>Outside income?</b>	Yes  9%
<b>Options?</b>	Yes  12%
<b>Purchasing authority</b>	Evaluate/recommend  74% Determine need  9% Final purchasing authority  3% None  14%
<b>Professional background</b>	Technical  66% Business  25% Academic  4% Other  5%
<b>Time spent on BI projects</b>	Full  70% Three-quarters  15% One-half  11% One-quarter  4% None -

# Technical Architect/Systems Analyst

## GENERAL DESCRIPTION

- Defines and documents the technical architecture of the data warehouse, including the physical components and their functionality
- Evaluates, selects, tests, and optimizes hardware and software products

## KEY RESPONSIBILITIES

- Assesses current technical architecture
- Estimates system capacity to meet near- and long-term processing requirements
- Writes specifications for client machines, application servers, database servers, and networks

## KEY SKILLS






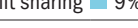

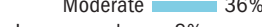
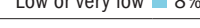







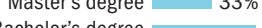






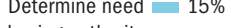


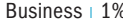
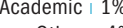
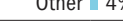

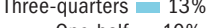
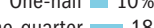
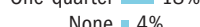

- Technical design
- Understanding of capabilities of vendor infrastructure products, including SMP (symmetric multiprocessing) and MPP (massively parallel processing) systems
- Knowledge of data warehousing architectural approaches
- Conceptual and analytical skills

## KEY DELIVERABLES

- Capacity planning estimates
- Technical architecture documents
- Hardware and software product recommendations
- Cost estimates for technical components
- Regular performance and capacity planning audits

## COMMON SECONDARY ROLES

- Data acquisition (ETL) architect/developer (40%)
- Decision support (BI) architect/developer (35%)
- Data analyst/data modeler (28%)
- Lead information architect (28%)
- Average number of secondary roles: 3.1

<b>Annual salary</b>	\$99,699
<b>Bonuses</b>	\$8,312
<b>Average salary change from 2008</b>	-1.9%
<b>Age</b>	40.7 years
<b>Gender</b>	Male 82%  18% Female
<b>BI experience</b>	6.4 years
<b>Number of certifications</b>	2.6
<b>Years at company</b>	6.4 years
<b>Percent getting a bonus</b>	Yes  60%
<b>Types of bonuses</b>	Individual  66% Company  45% Team  32% Profit sharing  9%
<b>Job satisfaction</b>	Very high or high  55% Moderate  36% Low or very low  8%
<b>Fairly compensated?</b>	Yes  61% No  30% Unsure  8%
<b>Looking for new job?</b>	Yes  10% Somewhat  41% No  49%
<b>Level of education</b>	PhD  2% Master's degree  33% Bachelor's degree  58% Associate's degree  2% High school  5%
<b>Outside income?</b>	Yes  13%
<b>Options?</b>	Yes  16%
<b>Purchasing authority</b>	Evaluate/recommend  73% Determine need  15% Final purchasing authority - None  13%
<b>Professional background</b>	Technical  94% Business  1% Academic  1% Other  4%
<b>Time spent on BI projects</b>	Full  56% Three-quarters  13% One-half  10% One-quarter  18% None  4%



# Business Requirements Analyst

## GENERAL DESCRIPTION

- Serves as a liaison between the end users and data warehousing project team
- Coordinates business requirements for data

## KEY RESPONSIBILITIES

- Interviews end users to determine requirements for data, reports, analyses, metadata, training, service levels, data quality, and performance
- Works with architects to translate requirements into technical specifications
- Helps identify and assess potential data sources
- Recommends appropriate scope of requirements
- Validates that data warehouse meets requirements and service-level agreements
- Coordinates prototype reviews

## KEY SKILLS
























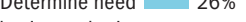
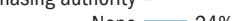







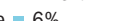

- Experience using data warehouse or analytical tools for business purposes
- Strong interpersonal and communications skills
- Ability to translate business requirements into technical requirements
- Knowledge of key data warehousing processes
- Respected within the business community

## KEY DELIVERABLES

- Business requirements documentation
- Business priorities
- Prototype feedback

## COMMON SECONDARY ROLES

- Subject matter expert (57%)
- Data analyst or modeler (54%)
- Data quality analyst (35%)
- Average number of secondary roles: 3.5

<b>Annual salary</b>	\$84,788
<b>Bonuses</b>	\$6,800
<b>Average salary change from 2008</b>	+4.5%
<b>Age</b>	43.0 years
<b>Gender</b>	Male 60%  40% Female
<b>BI experience</b>	5.7 years
<b>Number of certifications</b>	1.8
<b>Years at company</b>	7.1 years
<b>Percent getting a bonus</b>	Yes  64%
<b>Types of bonuses</b>	Individual  48% Company  42% Team  21% Profit sharing  15%
<b>Job satisfaction</b>	Very high or high  55% Moderate  41% Low or very low  4%
<b>Fairly compensated?</b>	Yes  47% No  34% Unsure  19%
<b>Looking for new job?</b>	Yes  7% Somewhat  43% No  50%
<b>Level of education</b>	PhD  4% Master's degree  24% Bachelor's degree  57% Associate's degree  10% High school  4%
<b>Outside income?</b>	Yes  5%
<b>Options?</b>	Yes  11%
<b>Purchasing authority</b>	Evaluate/recommend  50% Determine need  26% Final purchasing authority - None  24%
<b>Professional background</b>	Technical  54% Business  28% Academic  9% Other  9%
<b>Time spent on BI projects</b>	Full  47% Three-quarters  21% One-half  11% One-quarter  15% None  6%

# Business Sponsor

## GENERAL DESCRIPTION

- Works closely with (and often overlaps with) a BI director or equivalent person
- Sets BI business strategy and budget, contributes to technical details associated with these
- Serves as liaison between the business and the BI team, giving shameless priority to the former
- Usually has a full-time business management position, and sponsors BI part time

## KEY RESPONSIBILITIES

- Contributes substantially to general IT/business alignment
- Keeps BI (and maybe other IT areas) focused on business requirements and goals
- Develops business requirements
- Provides budget or assists in acquiring necessary funding
- Establishes business ownership of BI systems and data
- Serves on data- or BI-oriented committees, often for stewardship and governance
- Participates in (and often controls) tool and platform acquisition decisions

## KEY SKILLS






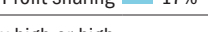


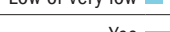





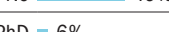


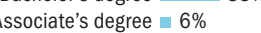
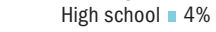





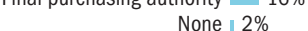



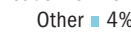






- Domain expertise in one or more business areas
- Knowledge of how BI and its data impact specific business processes
- Ability to map business pains and opportunities to possible IT solutions
- Effective cross-functional communication with a wide range of business, IT, and hybrid personnel
- Understanding of what to look for in vendor products and services for BI

## KEY DELIVERABLES

- BI requirements—both strategic and tactical—from a business viewpoint
- BI funding
- Plans for new or revised BI work, based on business direction

## COMMON SECONDARY ROLES

- Business user (63%)  
Subject matter expert (55%)  
Data owner/steward (33%)  
BI director (12%)
- Average number of secondary roles: 3.4

<b>Annual salary</b>	\$125,412
<b>Bonuses</b>	\$24,977
<b>Average salary change from 2008</b>	+5.1%
<b>Age</b>	42.5 years
<b>Gender</b>	Male 61%  39% Female
<b>BI experience</b>	7.3 years
<b>Number of certifications</b>	1.7
<b>Years at company</b>	7.6 years
<b>Percent getting a bonus</b>	Yes  78%
<b>Types of bonuses</b>	Individual  71% Company  76% Team  20% Profit sharing  17%
<b>Job satisfaction</b>	Very high or high  51% Moderate  39% Low or very low  10%
<b>Fairly compensated?</b>	Yes  59% No  22% Unsure  20%
<b>Looking for new job?</b>	Yes  10% Somewhat  41% No  49%
<b>Level of education</b>	PhD  6% Master's degree  51% Bachelor's degree  33% Associate's degree  6% High school  4%
<b>Outside income?</b>	Yes  16%
<b>Options?</b>	Yes  36%
<b>Purchasing authority</b>	Evaluate/recommend  66% Determine need  16% Final purchasing authority  16% None  2%
<b>Professional background</b>	Technical  22% Business  69% Academic  6% Other  4%
<b>Time spent on BI projects</b>	Full  22% Three-quarters  34% One-half  22% One-quarter  18% None  4%



## **TDWI** RESEARCH

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TDWI Research provides research and advice for BI professionals worldwide. TDWI Research focuses exclusively on BI/DW issues and teams up with industry practitioners to deliver both broad and deep understanding of the business and technical issues surrounding the deployment of business intelligence and data warehousing solutions. TDWI Research offers reports, commentary, and inquiry services via a worldwide Membership program and provides custom research, benchmarking, and strategic planning services to user and vendor organizations.



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