



# SALARY SURVEY



JUNE 2007

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## Summary

### Methodology

An email survey was sent to *Design News* magazine subscribers. The study was fielded during the month of May. Results of the survey were tabulated by Research Results, an independent research firm.

Results are based on 1,225 usable replies. At a 95% confidence level, results are accurate with a margin of +/- 2.8%

### Demographics

- Average age is 46.
- Average number of years as an engineer: 18; years in current job: 6.5.
- 95% have college degrees, with 46% having a Bachelor's in Engineering and 19% having a Master's.
- Of those with degrees in engineering, 40% have degrees in mechanical engineering; 27% in electrical engineering.
- 75% have some degree of supervisory responsibility, with 53% having budgetary responsibility.
- Respondents work in a large variety of industries, with automotive, aerospace, and medical among the top fields.

### Compensation

- Average annual salary is \$78,000.
- Nearly a quarter of salaries over the past 12 months are above \$100,000.
- Most salary increases were between 2% and 4%, with an average of 3%.



## Summary (continued)

### Job Responsibilities

- Respondents supervise an average of three people.
- Project management, computer, and communication skills are viewed as the most important skills for career advancement.

### Job satisfaction

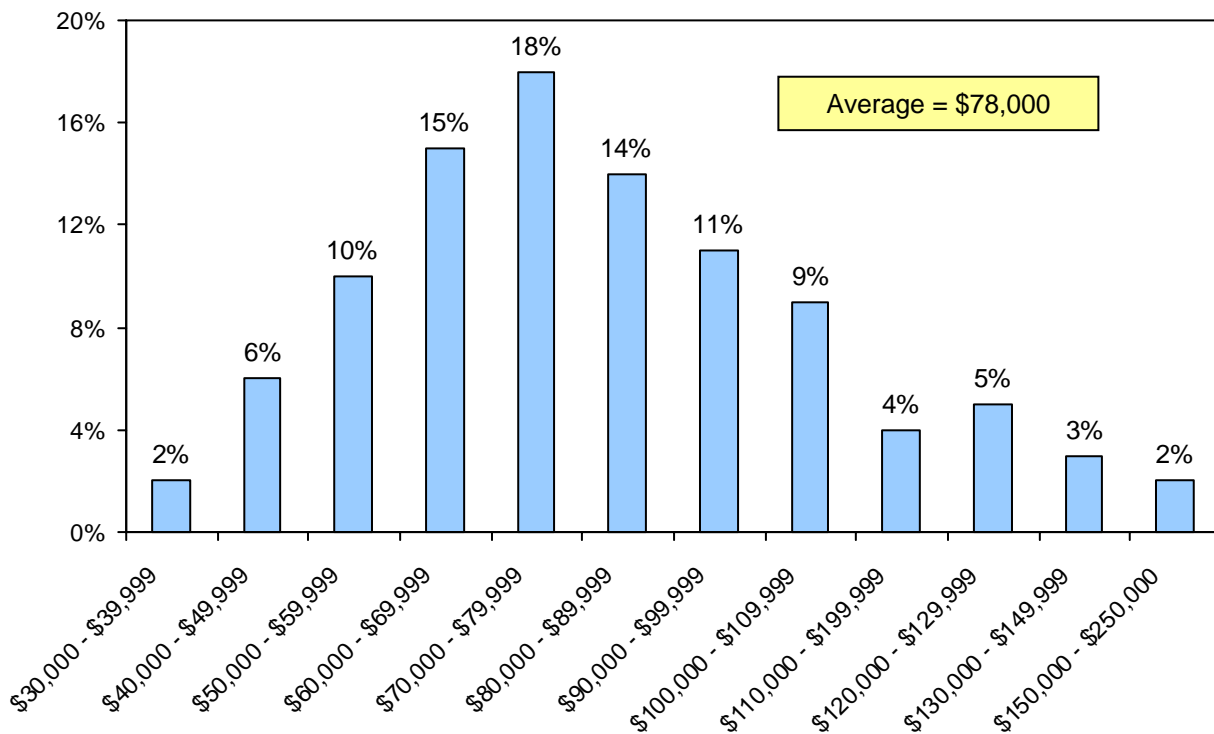
- 80% are satisfied with their careers; 73% are satisfied with their current jobs.
- 63% would recommend an engineering career to their children or friends.
- Over half feel their role as an engineer is respected and appreciated and that overall engineering is a respected profession.
- Nearly half feel they are fully using their engineering skills.
- Salary, feeling of accomplishment, and technical challenges are the top reasons for job satisfaction.
- Meeting deadlines, management issues, staying current with technology, and increased workload are the most difficult challenges in engineers' current jobs.

### Outlook and Industry Trends

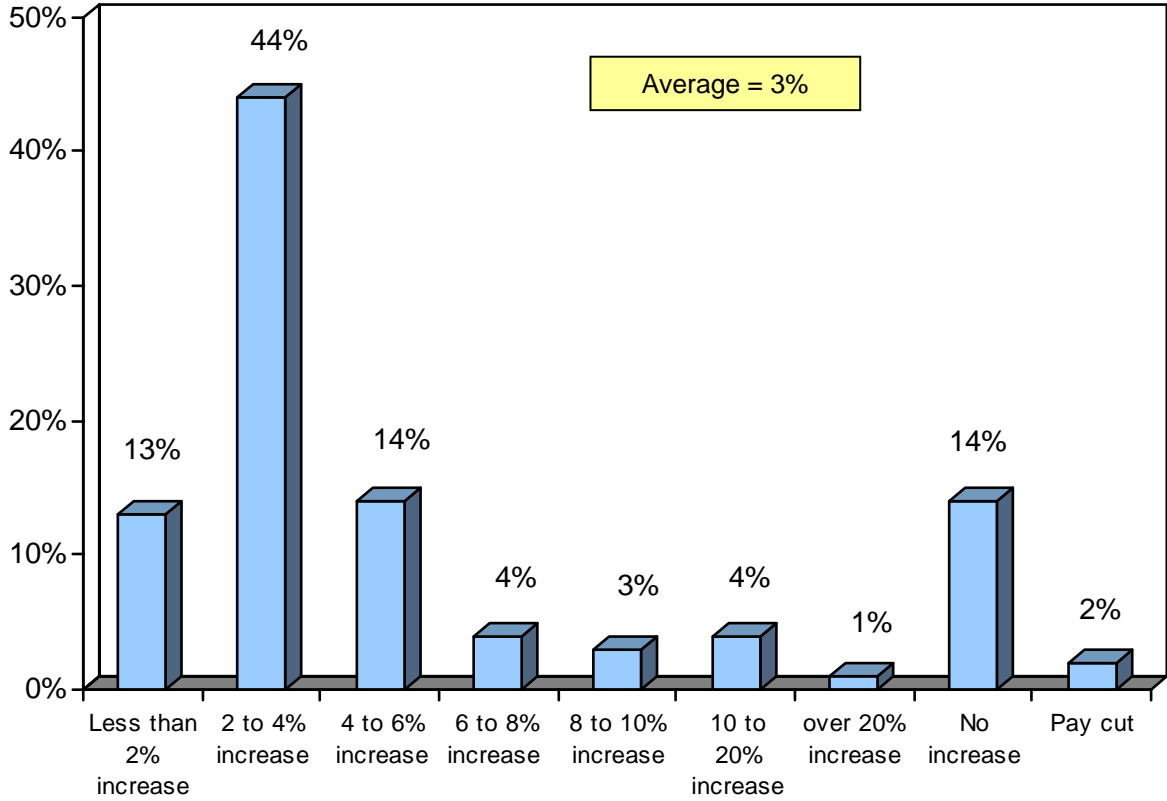
- Over the next five years, respondents anticipate a more diversified workload, more outsourcing, and more emphasis on design work.
- 78% of companies are outsourcing, with an average of 9% of a company's design work being outsourced.



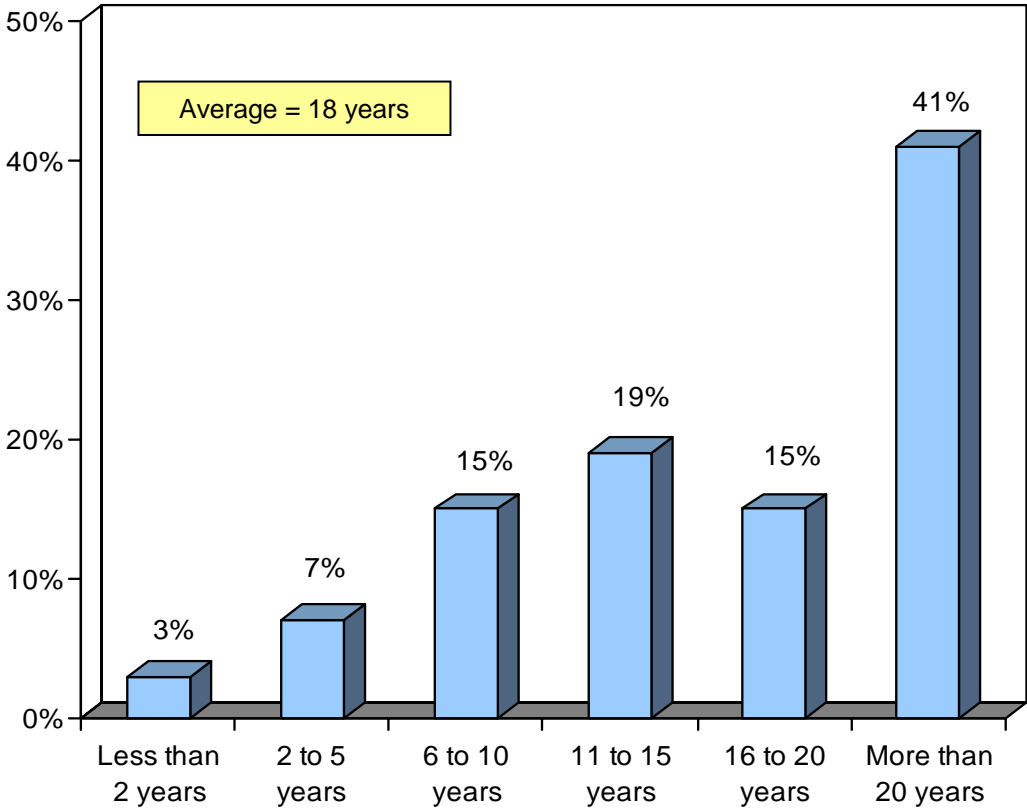
## What is your annual base salary?



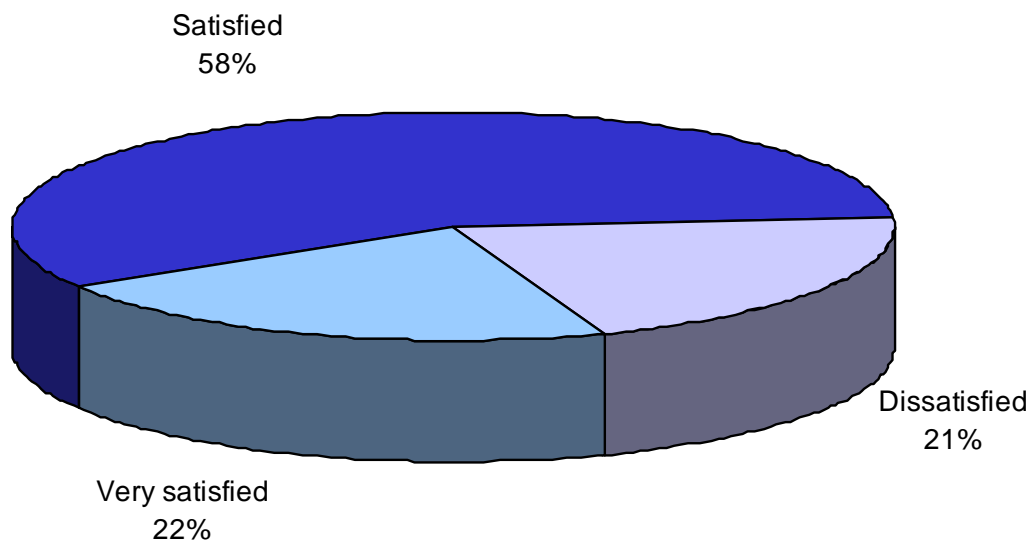
## In the past year, how did your salary level change?



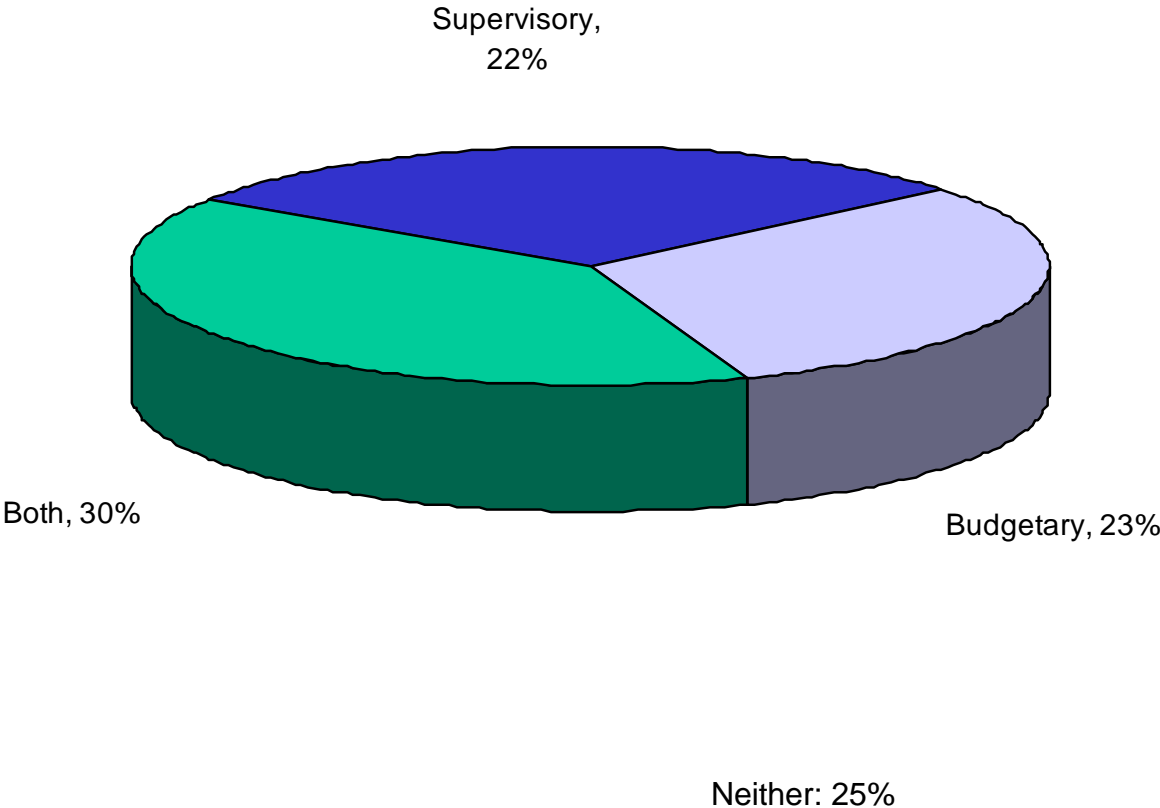
## For how long have you been an engineer?



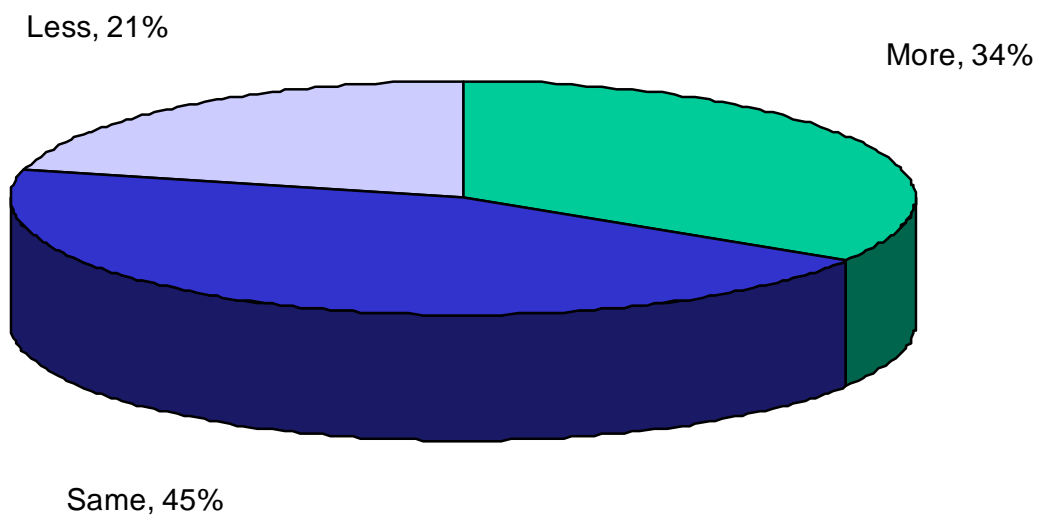
## In general, how satisfied are you with your engineering career?



# Do you have supervisory and/or budget responsibility?



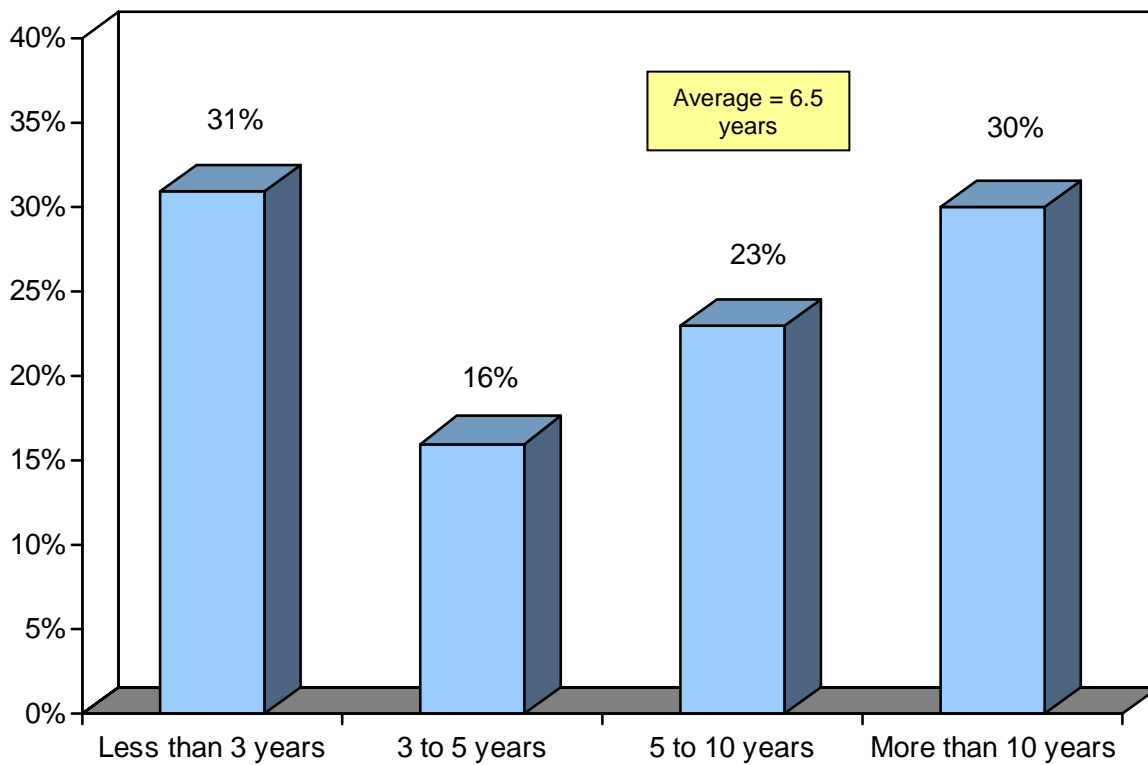
## If you are supervising people, how has this changed during the past 2 years?



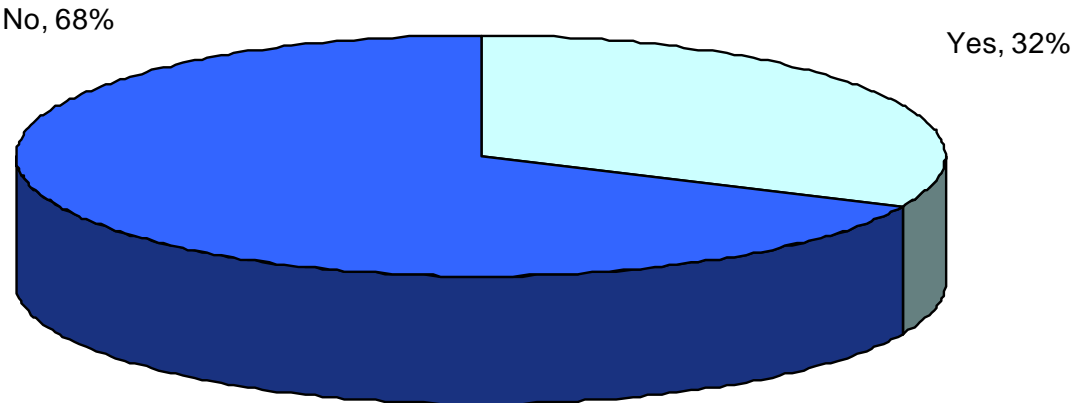
## What is the number of employees that you are supervising?

	Today	2 years ago
Fewer than 5	60%	64%
5 – 9	21%	20%
10 – 19	10%	8%
20 – 49	7%	6%
50 – 99	1%	2%
100 – 149	1%	0%
Average	3	3

## How many years have you worked in your present job?

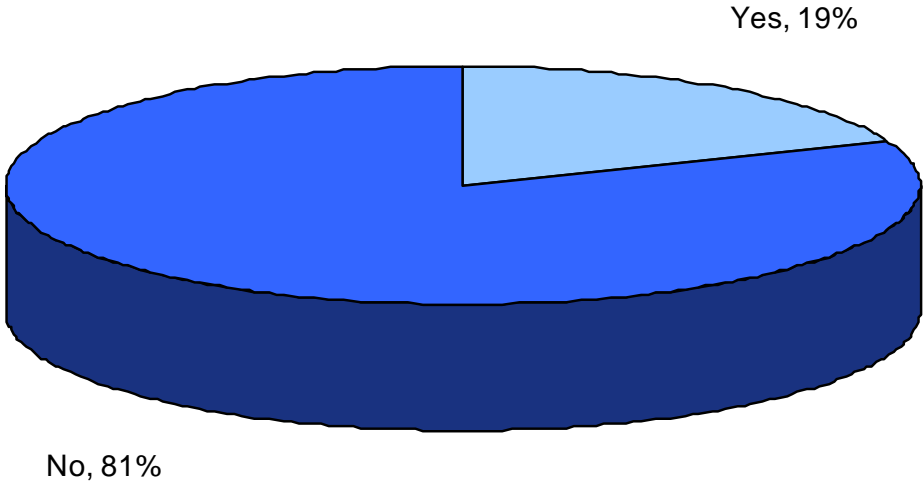


# Has your company laid off engineers in the past 12 months?



# Have you personally been affected by layoffs in the past 12 months?

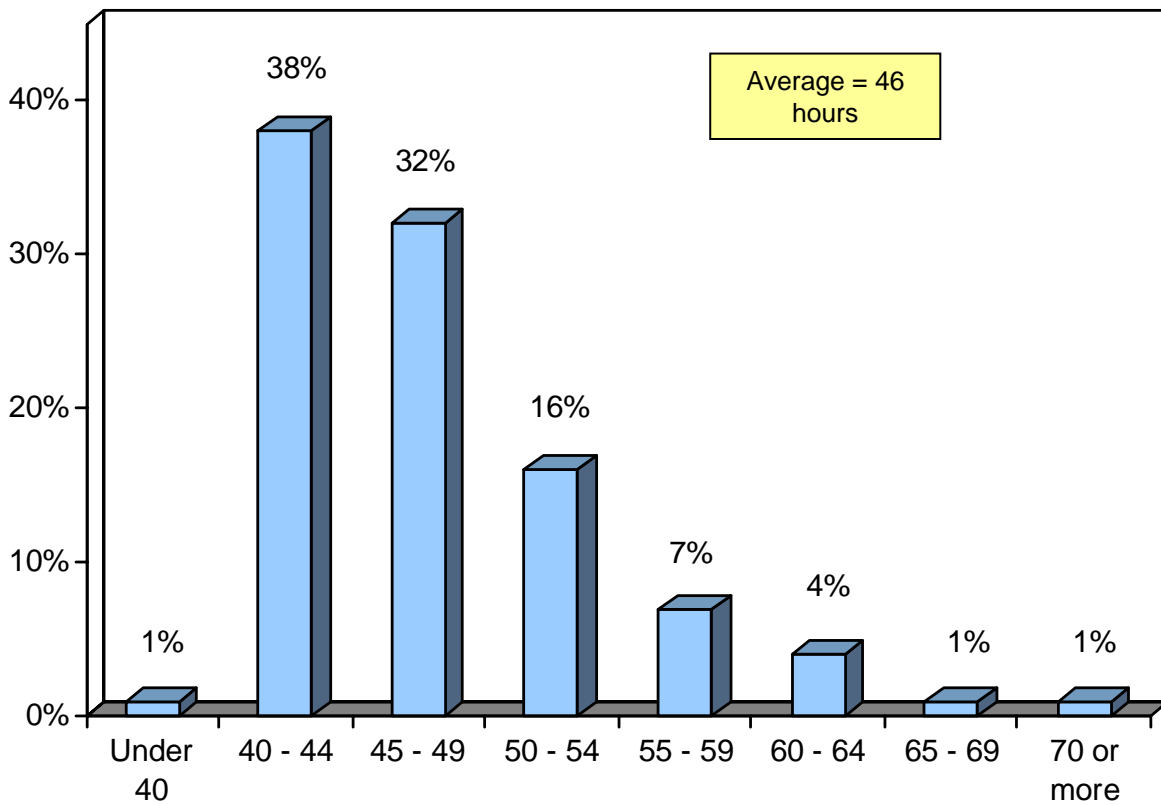
(among those whose companies have laid off engineers in the past 12 months)



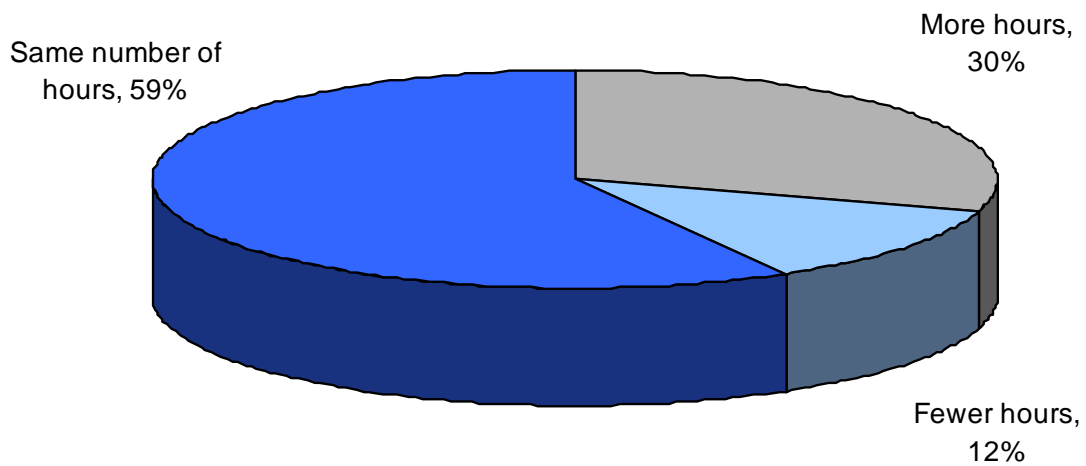
# What skills do engineers need to get ahead in their profession today?

	% of respondents
Project management skills	89%
Computer skills	88%
Communication/ presentation skills	88%
Team-building skills	71%
Language skills	45%
Marketing/ sales skills	37%
Finance/ accounting skills	36%
Other	11%

## In an average week, how many hours do you work?



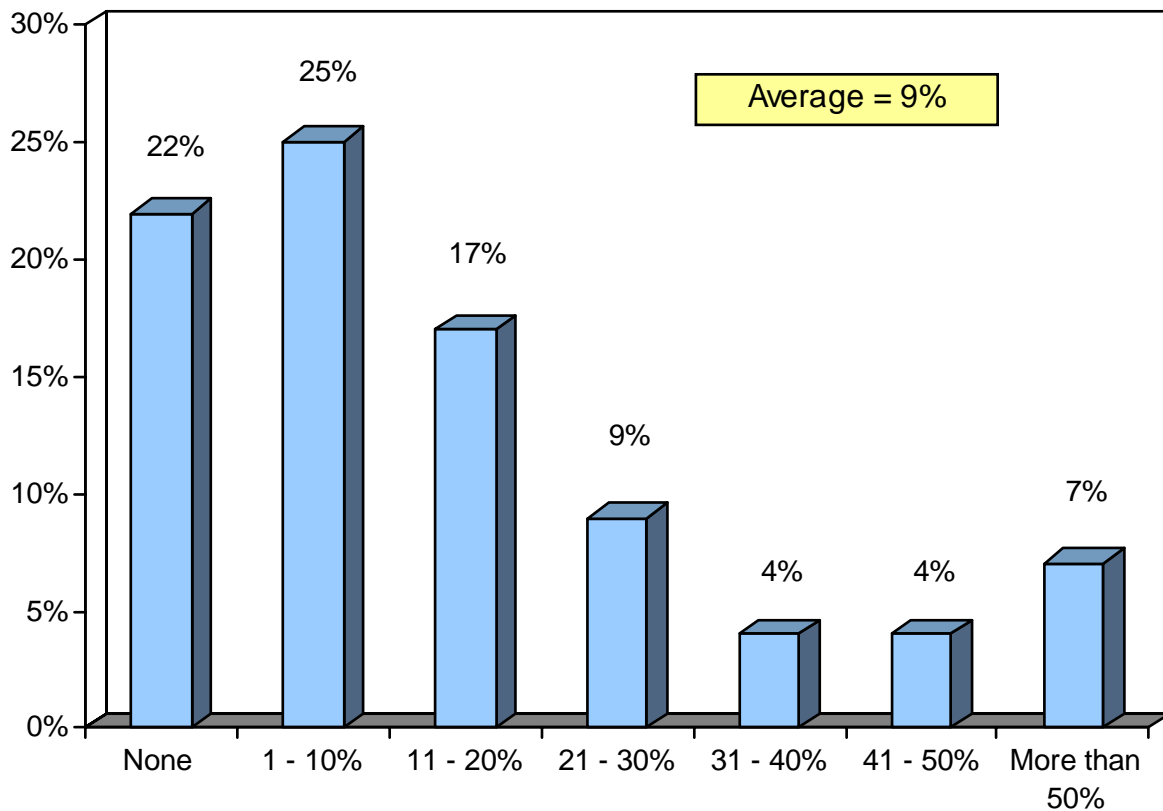
## How has the number of hours you work each week changed over the past year?



## What factors have the greatest impact on your satisfaction with your current job?

	% of respondents
Salary	45%
Feeling of accomplishment	41%
Technical challenge	40%
Relationship with colleagues	21%
Advancement opportunities	20%
Benefits	20%
Job Security	20%
Feeling of recognition	18%
Location	15%
Relationship with boss	15%
Company's financial health	10%
Workload	9%
Leading a team	4%
Company size	4%
Physical or ergonomic environment at work (positive or negative)	4%
Travel	4%
Relationship with subordinates	2%
Managing people	2%
Other	3%

## How much of your company's design work is outsourced?



## What specific design work is your company outsourcing?

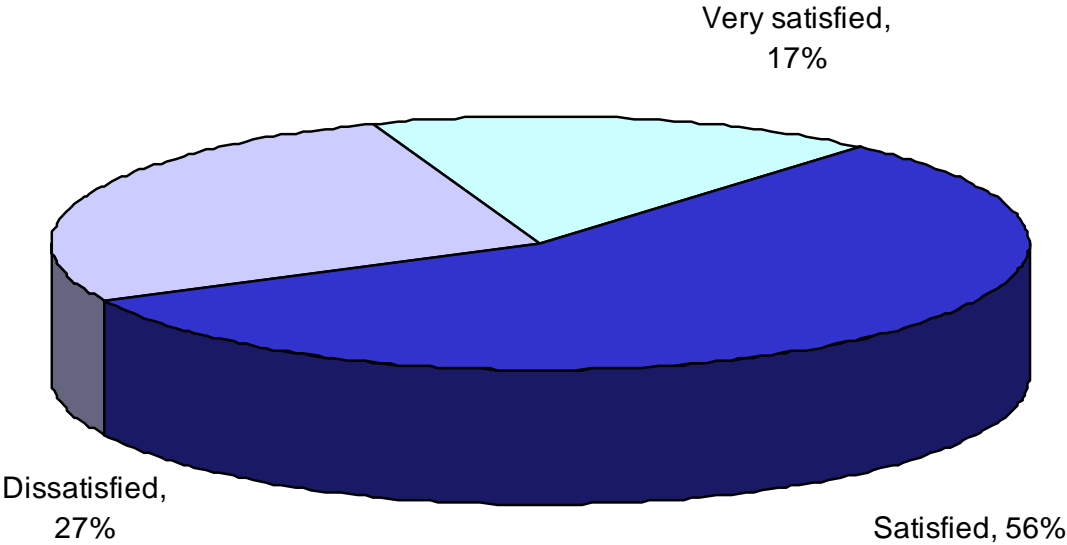
	% of respondents
Mechanical design	37%
CAD	29%
Board-level design	26%
Test & measurement	23%
Circuit design	22%
Systems design	21%
Applications engineering	17%
Other (structural, optomechanical, packaging)	18%

## What is the most difficult challenge you face in your current job? (unaided)

	% of respondents
Meeting deadlines/time management	14%
Poor/ incompetent management	13%
Staying current with technology	9%
Increased workload	9%
Limited resources/workforce	7%
Staying motivated/interested in my job	6%
Multi-tasking	5%
Outsourcing portions of the company	5%
Limited budget to complete projects/getting funding for new projects	4%
Developing new products	3%
Dealing with demanding clients	3%
Low salary/small pay increases	3%
Corporate politics/bureaucracy	3%
Job security	3%
Dealing with co-workers	3%
Lack of advancement opportunities	3%
Lack of recognition from management	3%

responses 3% and over are shown; see data tables for all other responses

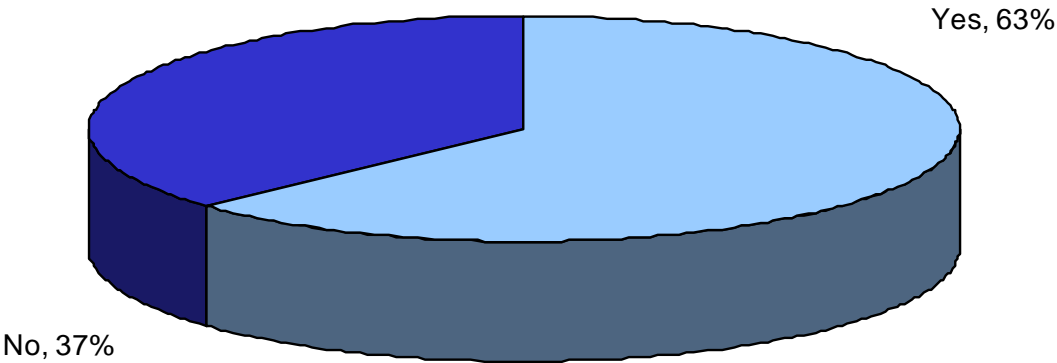
# How satisfied are you with your current position?



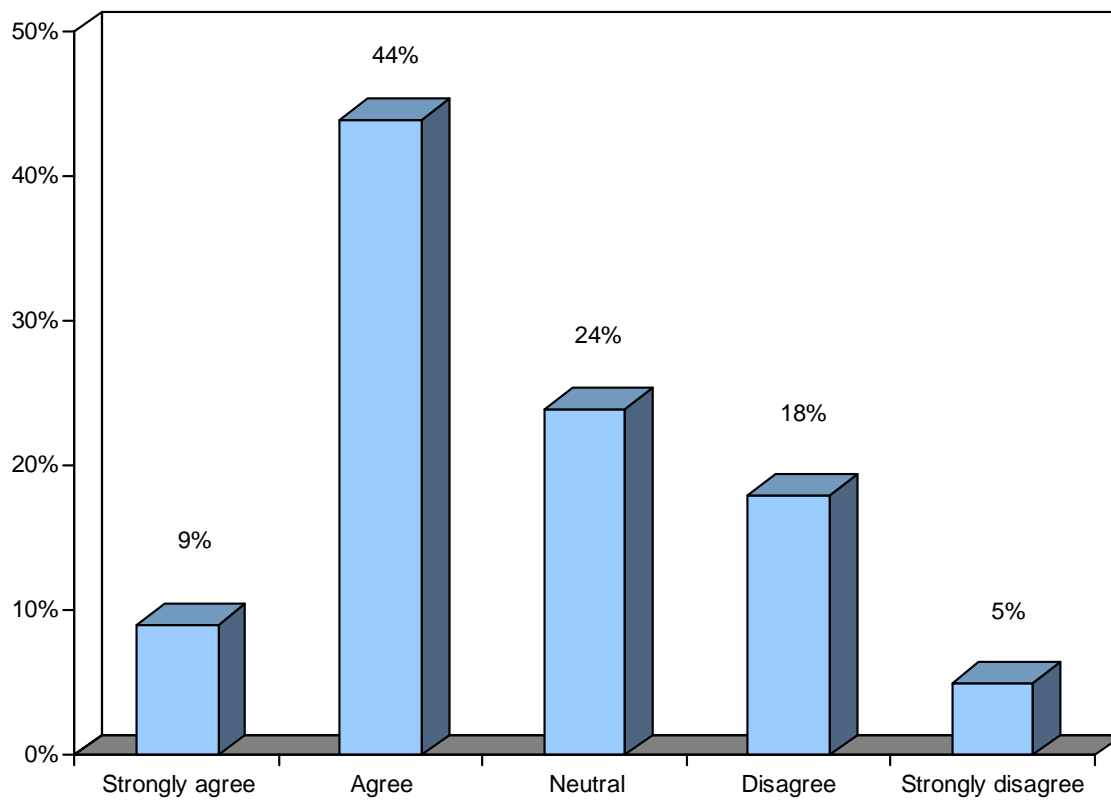
## How actively are you seeking another job?

	% of respondents
I'm always open to better opportunities	41%
Passively	24%
I'm happy where I am	23%
Actively	13%

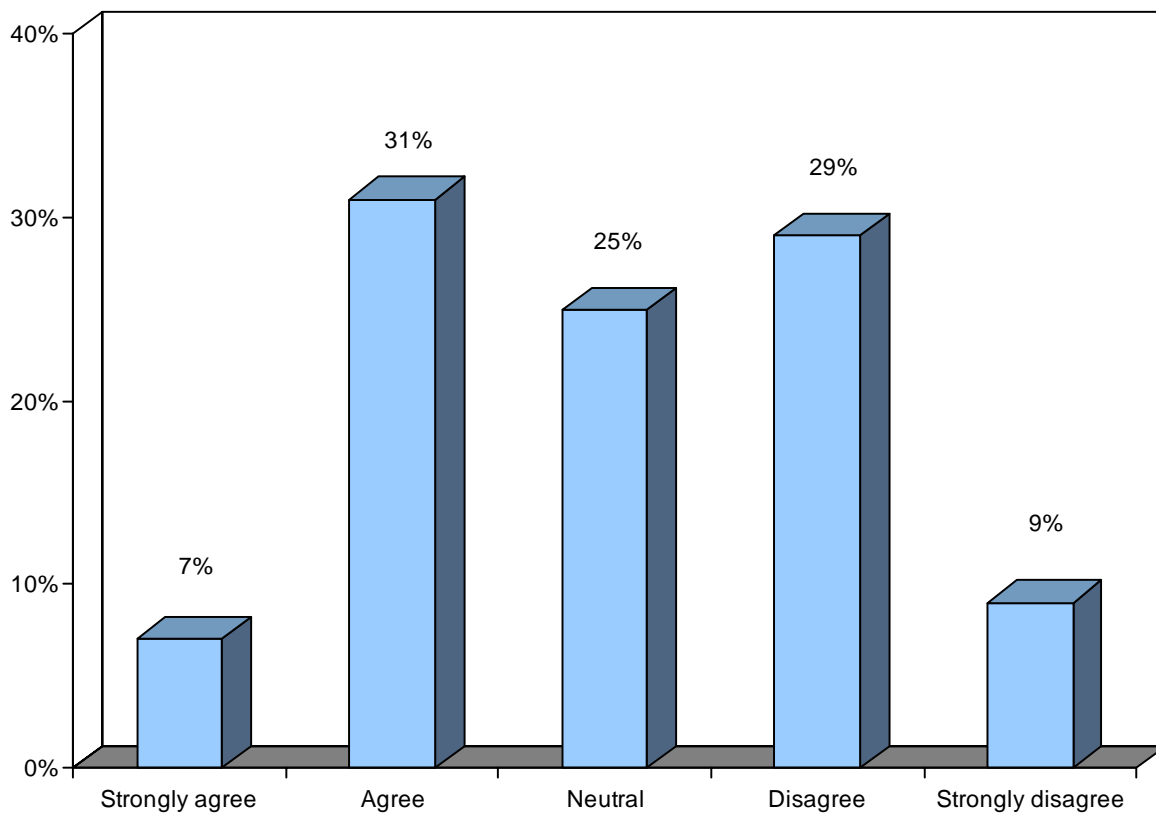
# Would you recommend this field to your son or daughter, or to a friend?



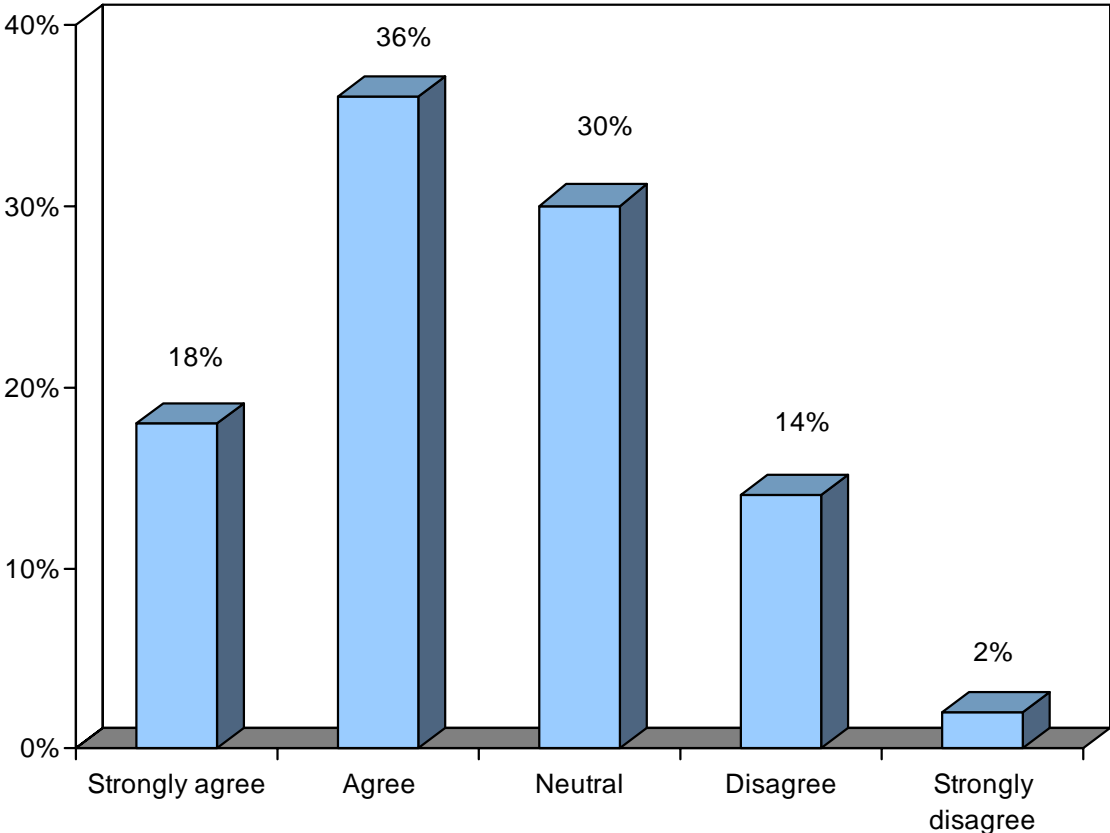
## I feel that I am appreciated and respected in my role as an engineer



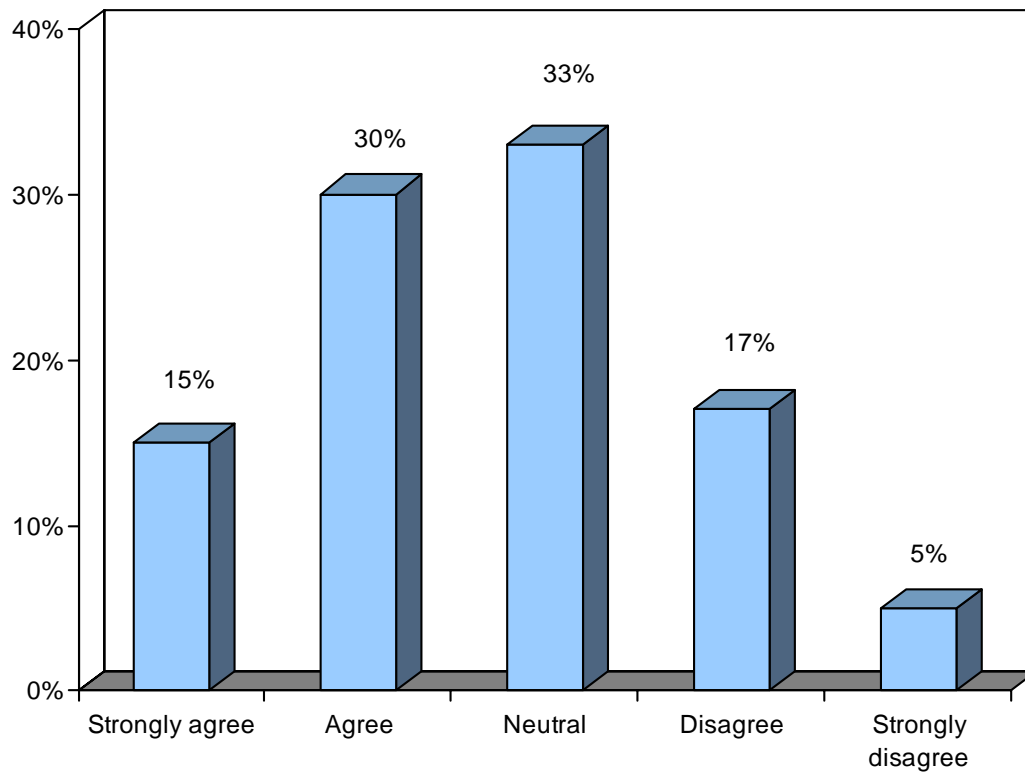
## I feel that I am fully using my engineering skills



# I feel that I am Underpaid and Overworked



## I feel that Engineering Work is Too Often Outsourced to China and/or Other Countries



## Summary of Agreement Statements

	% agreeing
Underpaid and overworked	54%
Appreciated and respected	53%
Too often outsourced to China and/or other countries	45%
Fully using engineering skills	38%

## Educational Background

	% of respondents
Bachelors degree in engineering	46%
Masters degree in engineering	19%
Two-year Associates degree in technical field	10%
Masters in business administration	7%
Bachelors in non-engineering field	5%
Advanced degree in non-engineering field	3%
Ph.D. in engineering	2%
Current student	1%
No college degree	5%
Other	1%

## What is your degree in, specifically? (unaided)

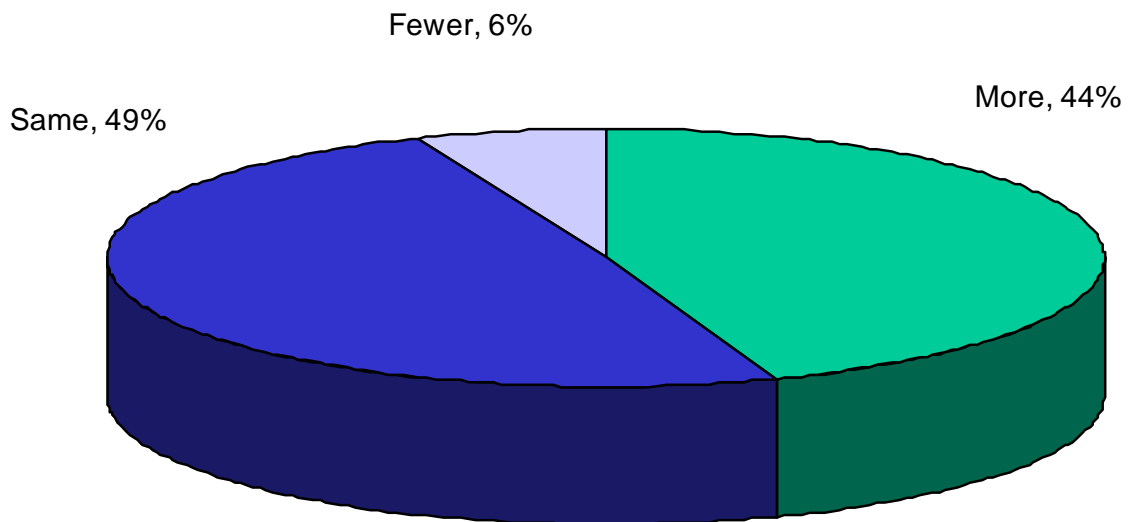
	% of respondents
Mechanical Engineering	40%
Electrical Engineering	27%
Business/ Management	6%
Electronics	6%
Computer Engineering/ Computer Science	5%
Industrial Engineering/ Industrial Technology	4%
Chemical Engineering	3%
Physics	2%
Manufacturing	2%
Mathematics	2%
Drafting	2%

responses 2% and over are shown; see data tables for all other responses

## What is your primary engineering discipline?

	% of respondents
Mechanical engineering	40%
Electrical/electronics engineering/Electromechanical engineering	30%
Manufacturing engineering	11%
Controls engineering	5%
Software engineering	4%
Materials engineering	2%
Other	7%

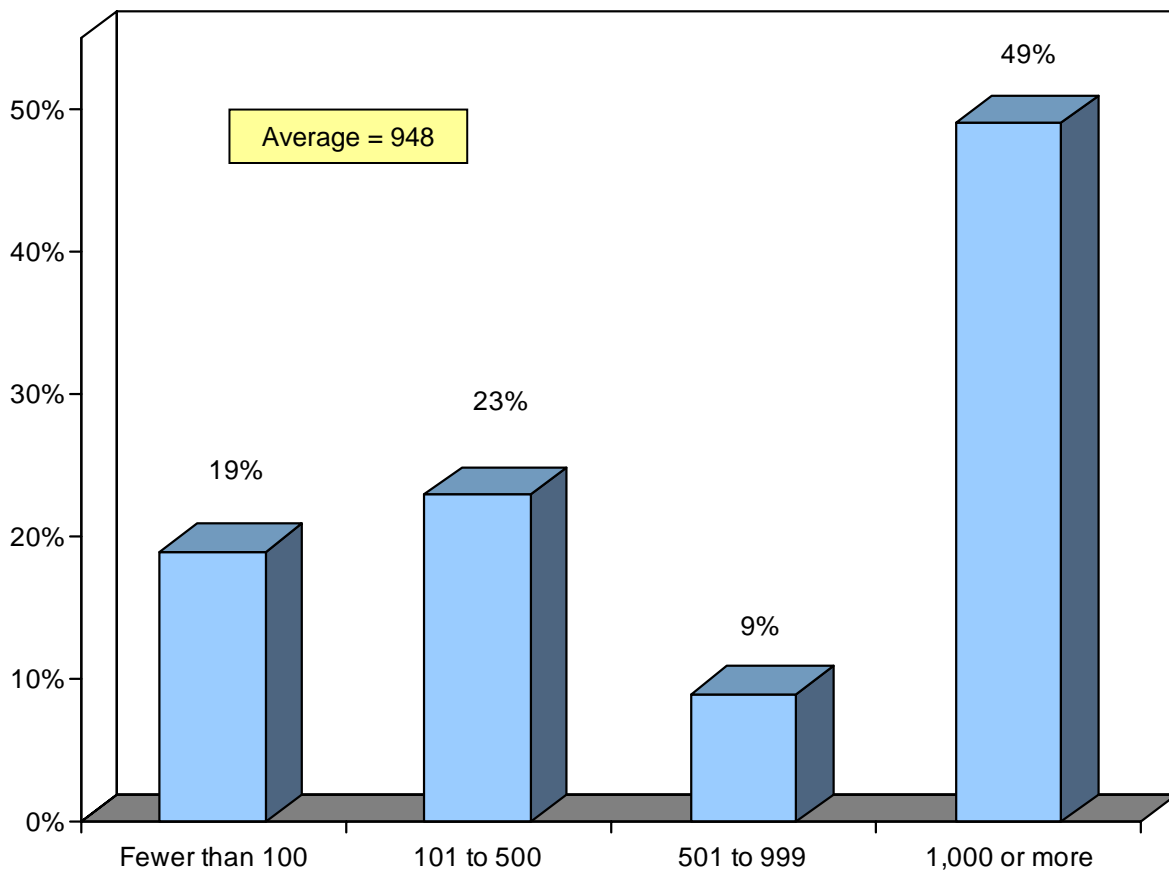
## Are you working on more, the same, or fewer disciplines now than 12 months ago?



## What is your company's major product line?

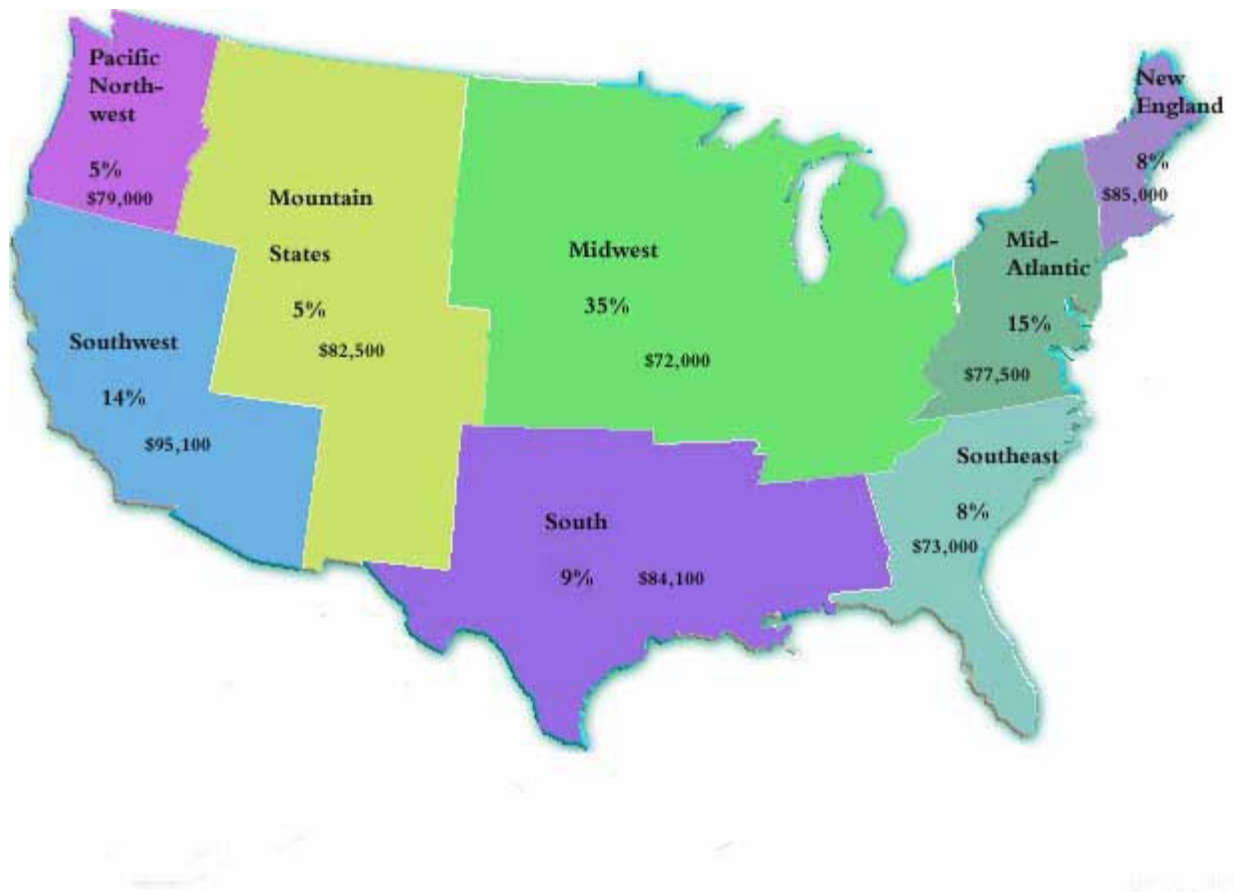
	% of respondents
Automotive	12%
Aerospace	9%
Medical	9%
Defense Systems	6%
Communication Systems	6%
Industrial Controls	5%
Semiconductors	4%
Consumer Electronics	4%
Computers/Peripherals	4%
Instruments/Test equipment	3%
Contract Manufacturing	3%
Machine Tools	3%
Electronic Components	2%
Other (biotechnology, rail, resins)	30%

## How many people does your company employ?

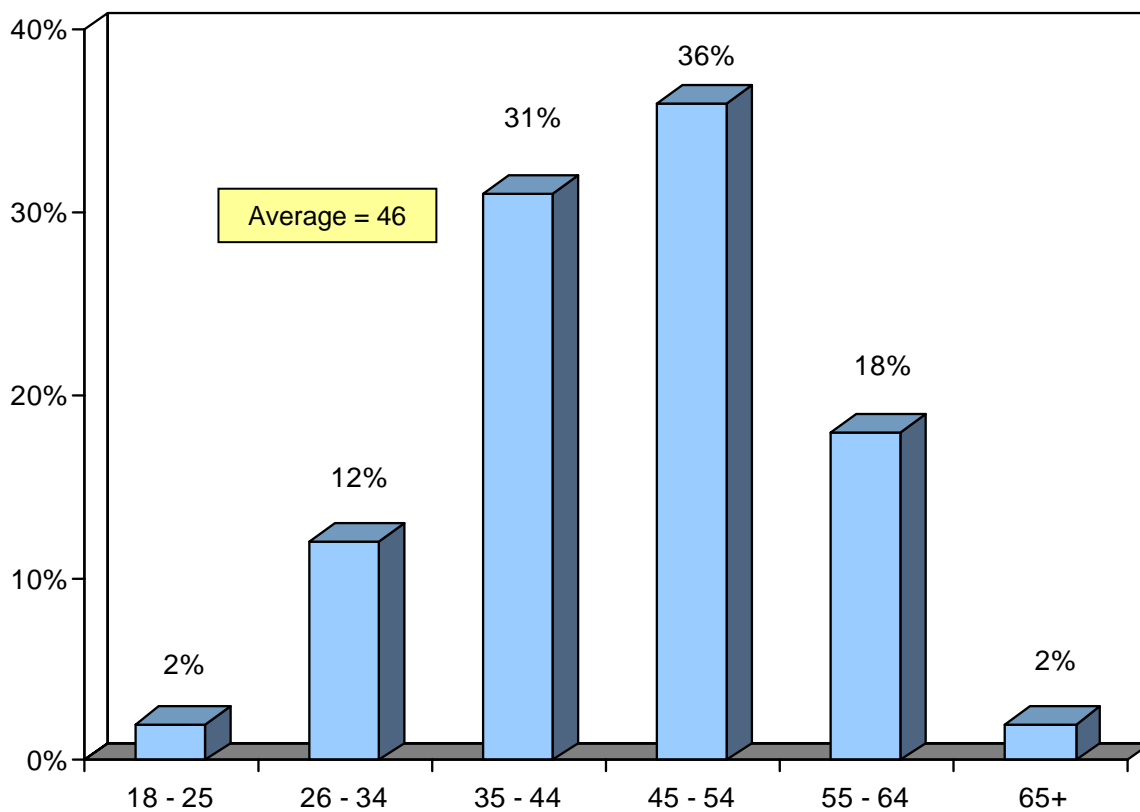


## In which region do you work?

Average salaries for each region are shown



## What is your age group?

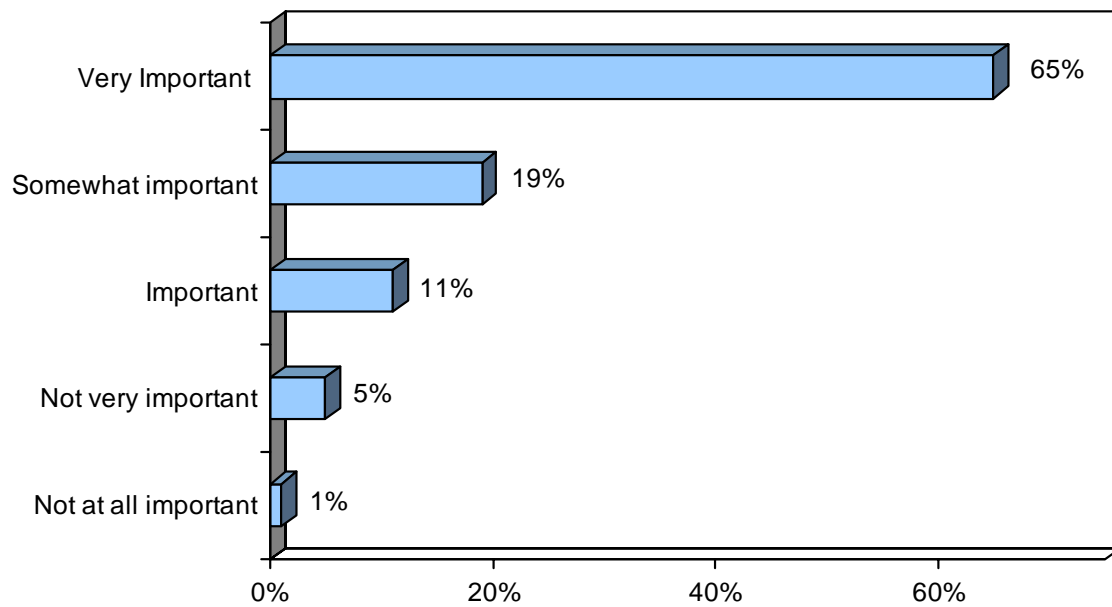


## Looking ahead over the next five years, where do you see the role of the engineer going? (unaided)

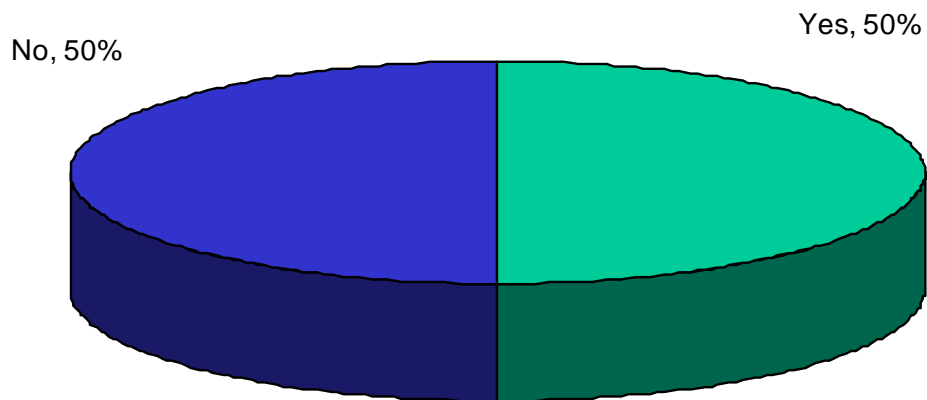
	% of respondents
Outsourcing engineering to other countries especially China, India	24%
Take on role as manager/project manager	15%
Serving as support/management for outsourced engineering	10%
Required to be more diversified/able to work in all areas of engineering	7%
More emphasis on design/more new products	6%
Engineering is declining	6%
Reduced to only high tech engineering/requires specialization in engineering	5%
Taking on non-engineering/administrative responsibilities	5%
Increased demand for computer/software engineering	4%
Less design/ more emphasis on integration	3%
Engineering becoming more important/growing	3%
More involved in sales/marketing	3%
Longer hours/heavy workload	3%
Will require more creativity/innovation	3%
Increased emphasis on system engineering	3%
Lower salaries	3%
Receive less respect	3%

responses 3% and over are shown; see data tables for all other responses.

## How important is being creative and innovative in your role as a design engineer?



**Do your current design projects require you to be more creative and innovative than a year ago?**



## Why are your current design projects requiring you to be more creative and innovative than a year ago? (unaided; respondents saying yes)

	% of respondents
Cost considerations/budget restrictions	21%
To stay ahead of the competition	15%
New technologies	10%
Designs becoming more complicated	9%
Demand for new products/new applications	8%
Innovation/ creativity sells products	8%
Faster to market/less time allocated to complete projects	6%
Everything needs to be better/quality requirements	5%
Making products smaller	5%
Customer demands	5%
Products require more features	4%
Do more with less attitude	3%
Change in responsibilities	3%
Have new and better ways to design	3%
Always new problems to solve	3%
Changes in the market	3%

responses 3% and over are shown; see data tables for all other responses.