

Full Employment: Good Or Bad News For The Information Security Profession?

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Agenda

- What do we mean by full employment?
- Workforce dynamics
- Workforce trends
- Effects of full employment
- How all this has come about
- Today's problems
- Summary



Background -(ISC)²

- Support security professionals throughout their careers
- Established in 1989 – Not for profit consortium of information security industry leaders
- Non- Executive Board of Directors – Top information security leaders worldwide
- Global standard for information security – (ISC)² CBK®, a compendium of information security topics
- Offered the first information technology-related credentials to be accredited to ANSI/ISO/IEC Standard 17024
- Membership of over 85,000 certified professionals; over 135 countries
- Foundation: Industry research; scholarships; Safe and Secure Online programme for school children



Background - Research sources

- (ISC)² Global Information Security Workforce study
 - Five previous studies 2004, 2005, 2006, 2008, 2010
 - 2012 Study currently being undertaken
 - 2004,2005 2006 surveys conducted by IDG
 - 2008, 2010 & 2012 conducted by Frost and Sullivan
 - Last survey (2010) was largest ever with 10,413 respondents
- (ISC)² 2012 Career Impact Survey
 - Second biannual survey
 - (ISC)² members polled
 - 2,250 responses



Demographics

- How many of you would consider yourselves information security professionals?
- How many of you are currently employed or are on contract?
- How many of you are looking for a new position?
- How many of you are recruiting staff at present?



Full employment

- Good news?
- Bad news?

- Paradoxically both are right

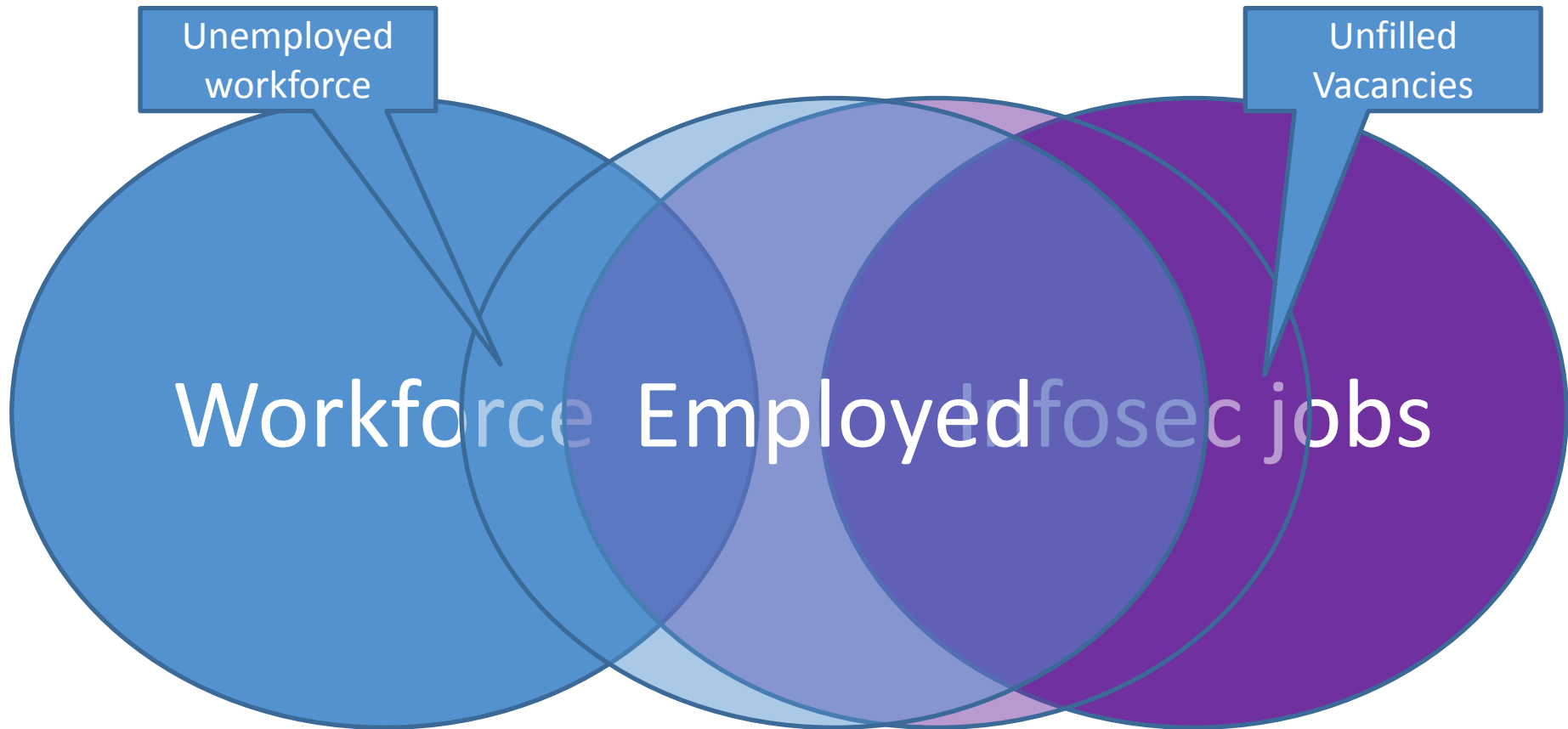


What do we mean by full employment?

- Unemployment = 0% - Tobin
- Unemployment < 3% - Beveridge
- Unemployment between 2% and 13% - Others



Workforce mapping

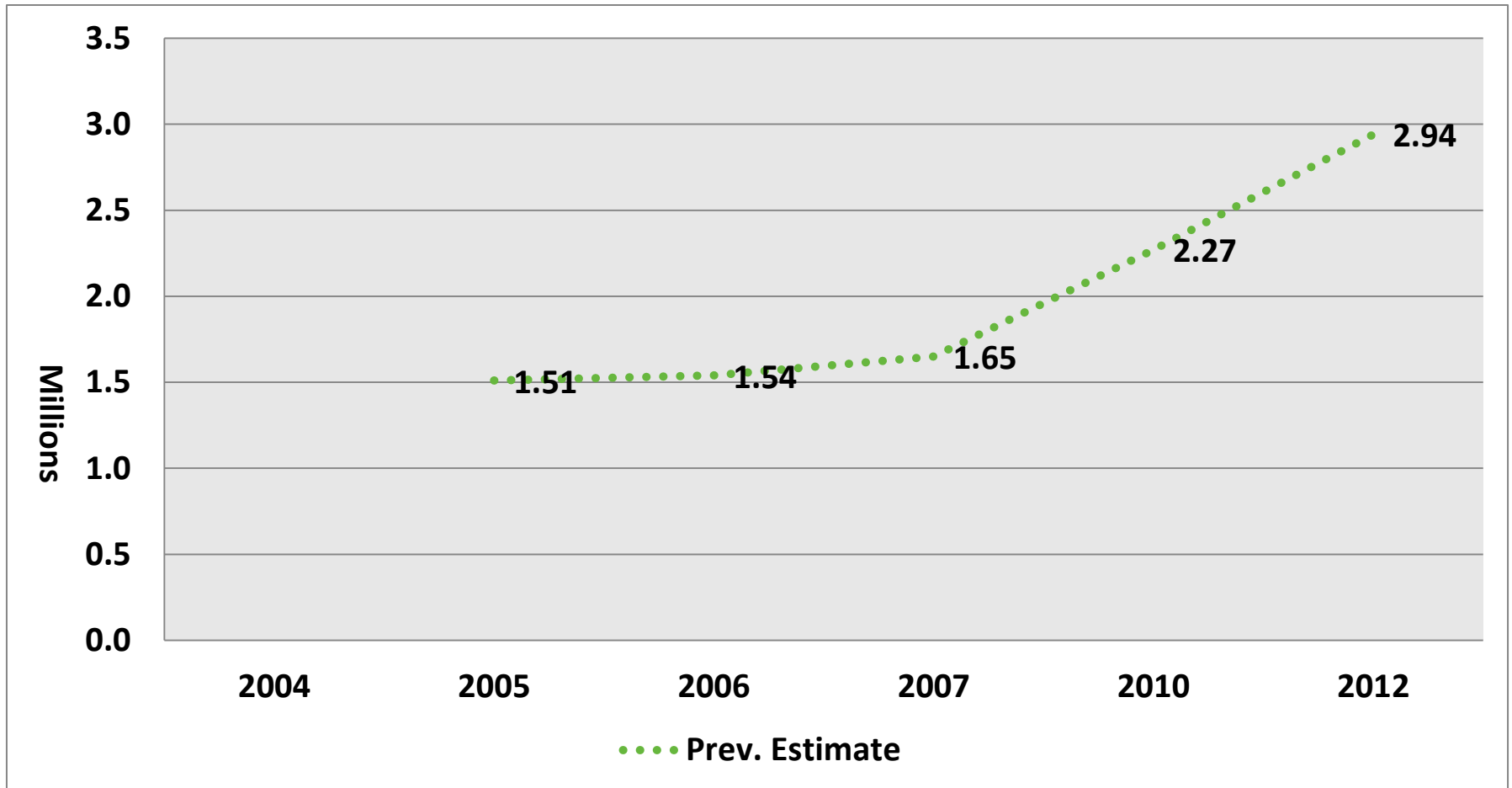


Employability

- Qualified
 - Has ability and competence
- Relevant
 - Has relevant skills, knowledge and experience
- Suitable
 - Qualifications and relevance are appropriate for the task in hand
- Proviso
 - Could be taught to be suitable



Growth in Information Security Workforce 2004 – 2010



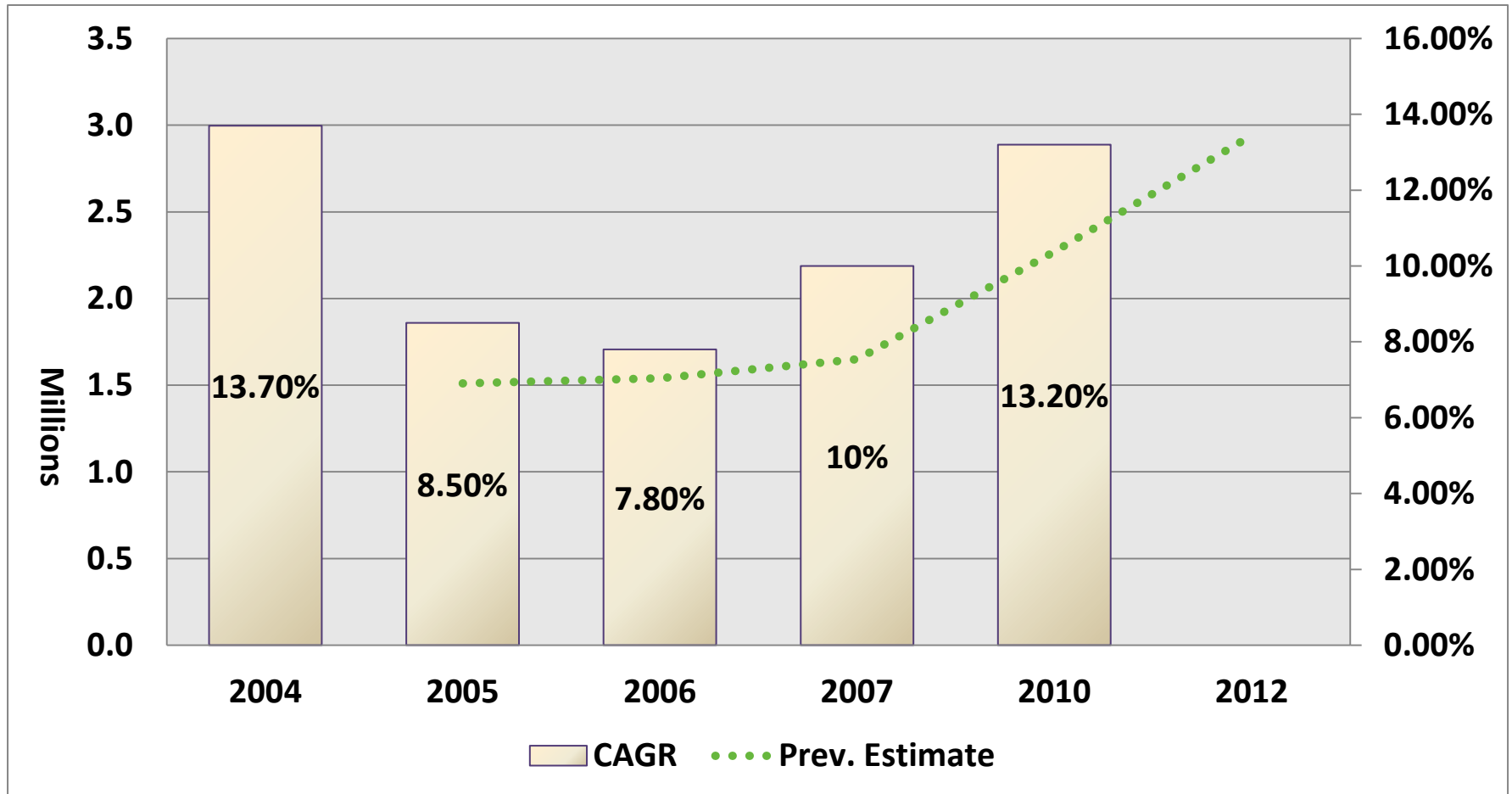
(ISC)² Global Workforce Surveys 2004 -2011)

IDG

Frost & Sullivan



Growth in Information Security Workforce 2004 – 2010



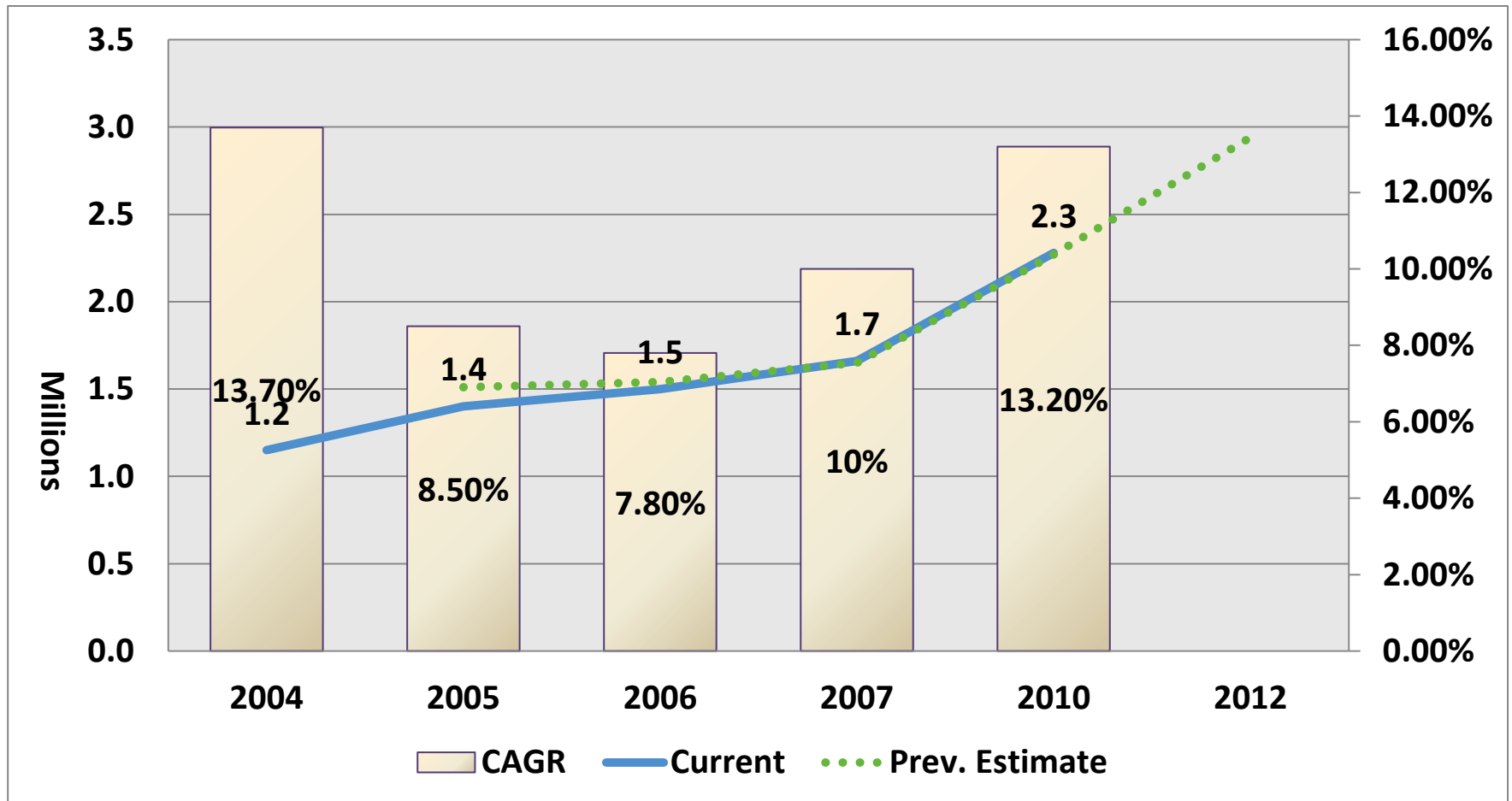
(ISC)² Global Workforce Surveys 2004 -2011)

IDG

Frost & Sullivan



Growth in Information Security Workforce 2004 – 2010



(ISC)² Global Workforce Surveys 2004 -2011)

IDG

Frost & Sullivan



Important figure - 2010 (2011) Survey

- Frost & Sullivan estimates the number of information security professionals worldwide in 2010 to have been approximately 2.28 million. This figure is expected to increase to almost 4.24 million by 2015, displaying a Compound Annual Growth Rate (CAGR) of 13.2 percent from 2010 to 2015 (see Table 1 below).

	2010	2011	2012	2013	2014	2015	2010-2015 CAGR
Americas	920,845	1,058,972	1,214,641	1,393,193	1,570,128	1,785,236	14.2%
EMEA	617,271	703,689	796,576	897,741	1,014,448	1,148,355	13.2%
APAC	748,348	830,666	924,531	1,038,248	1,168,029	1,310,529	11.9%
Total	2,286,464	2,593,327	2,935,748	3,329,183	3,752,605	4,244,120	13.2%

(ISC)² Global Workforce Survey 2011

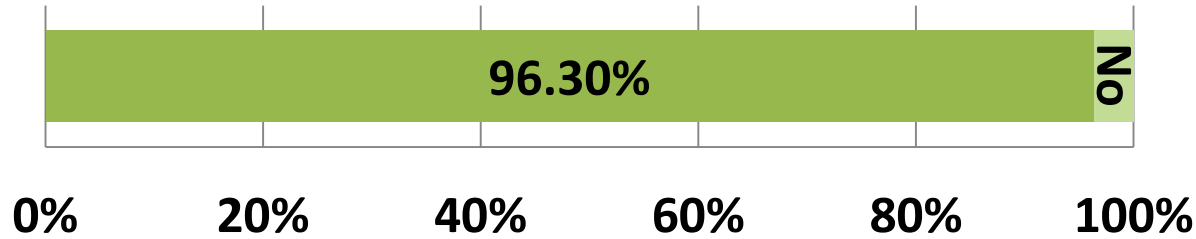


Conclusion

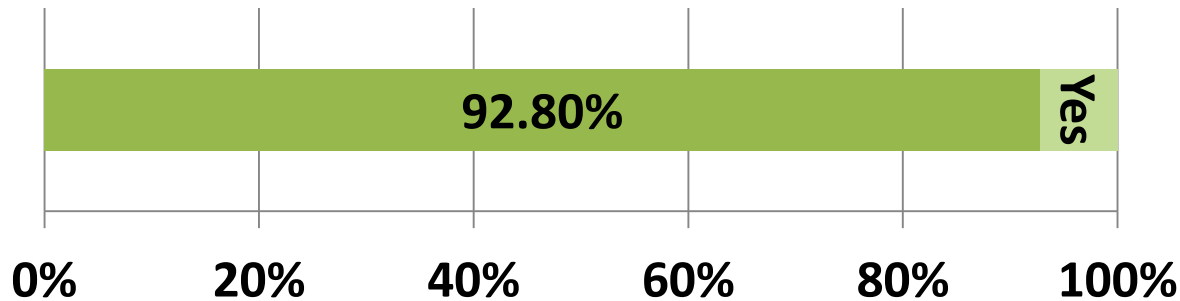
- The demand for information security personnel has been increasing over the past 7 years
- The demand for information security personnel will continue to increase
- It is possible that the number of people will almost double between 2010 and 2015



Are you currently employed?



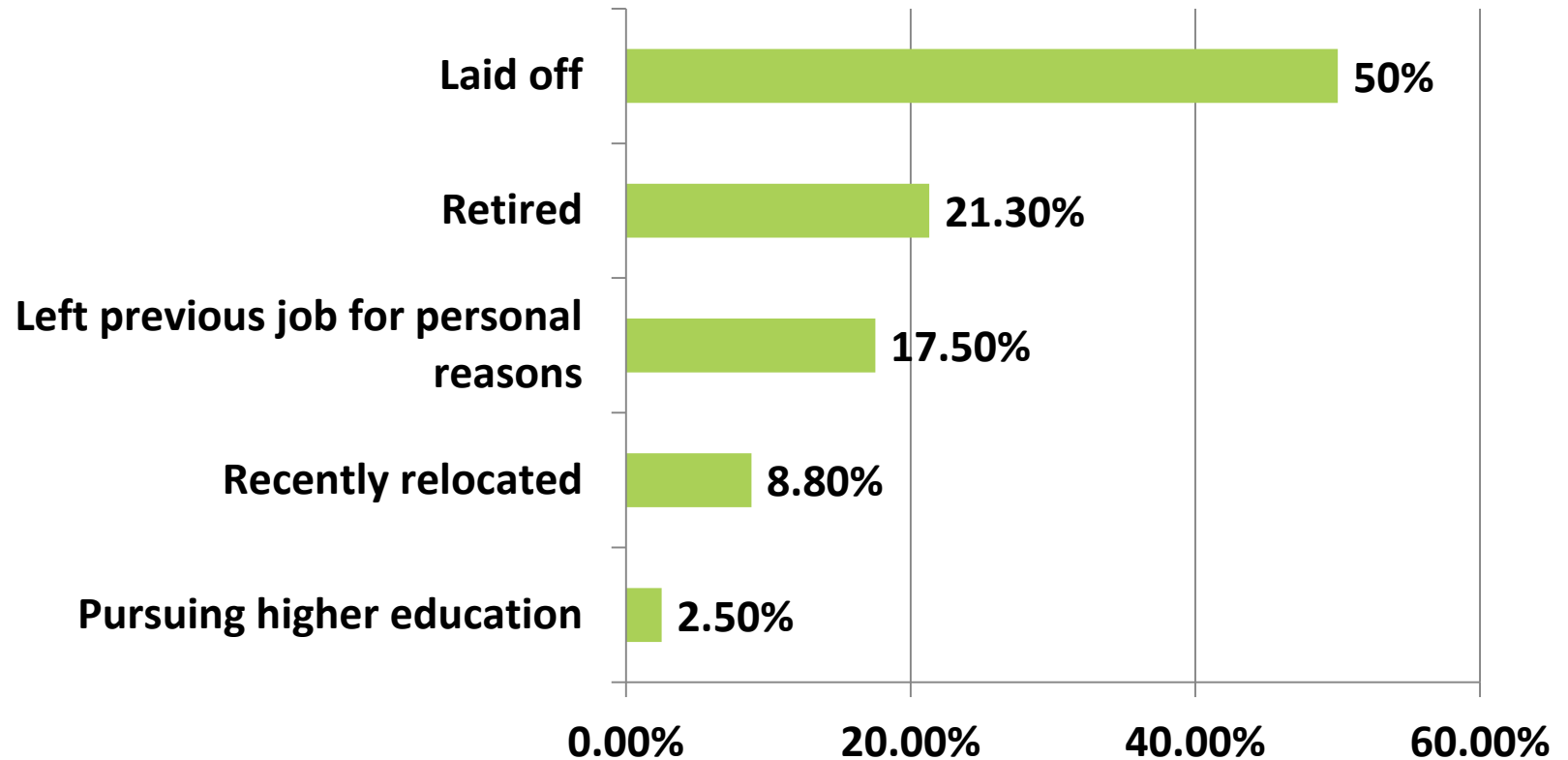
Were you unemployed at any point this year?



(ISC)² Career Impact Survey 2012



For which reasons are you not currently employed?



(ISC)² Career Impact Survey 2012



Conclusion - 2

- Information security is almost at full employment (unemployment < 4%)

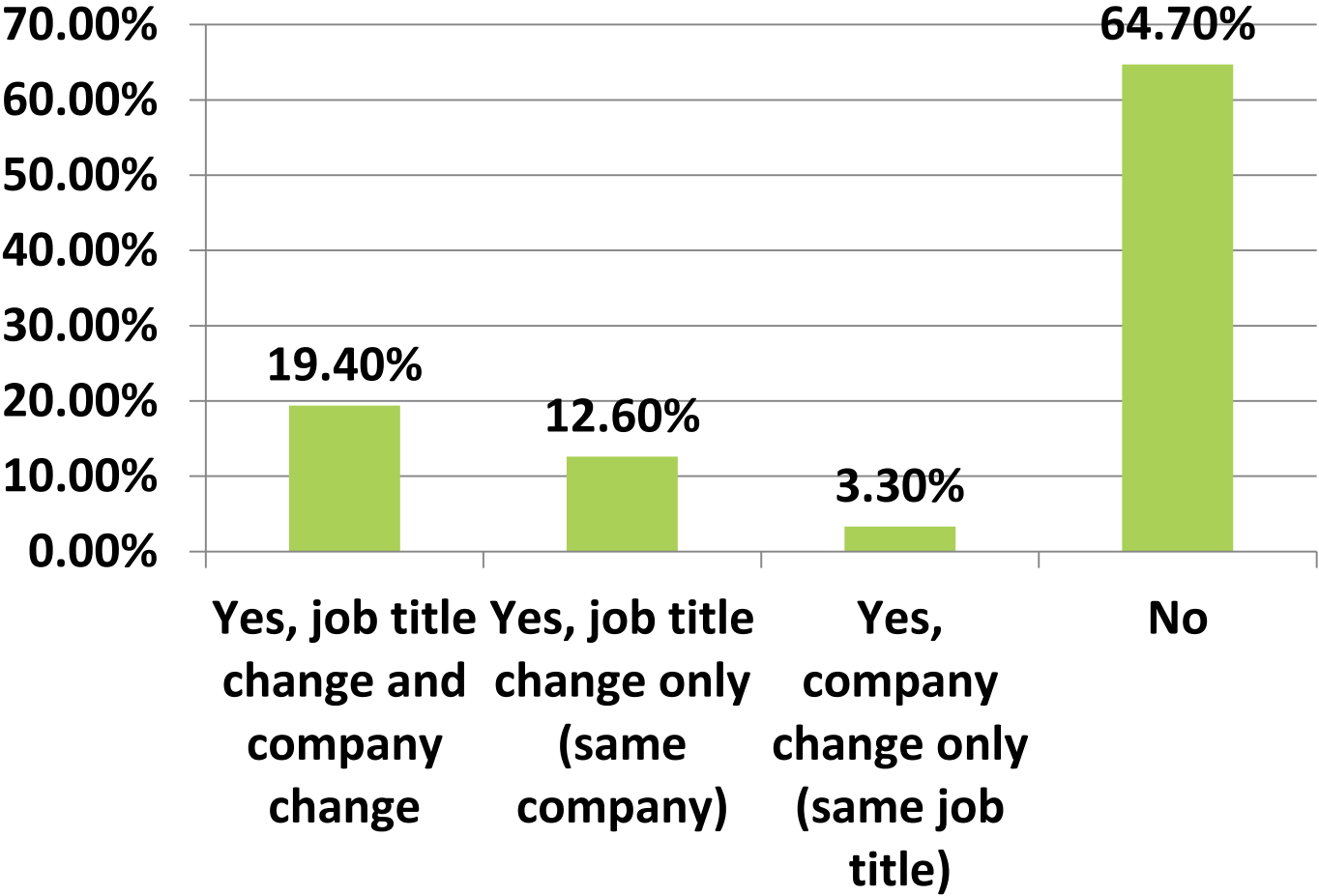


Full employment is good news

- Better opportunities for advancement and better jobs



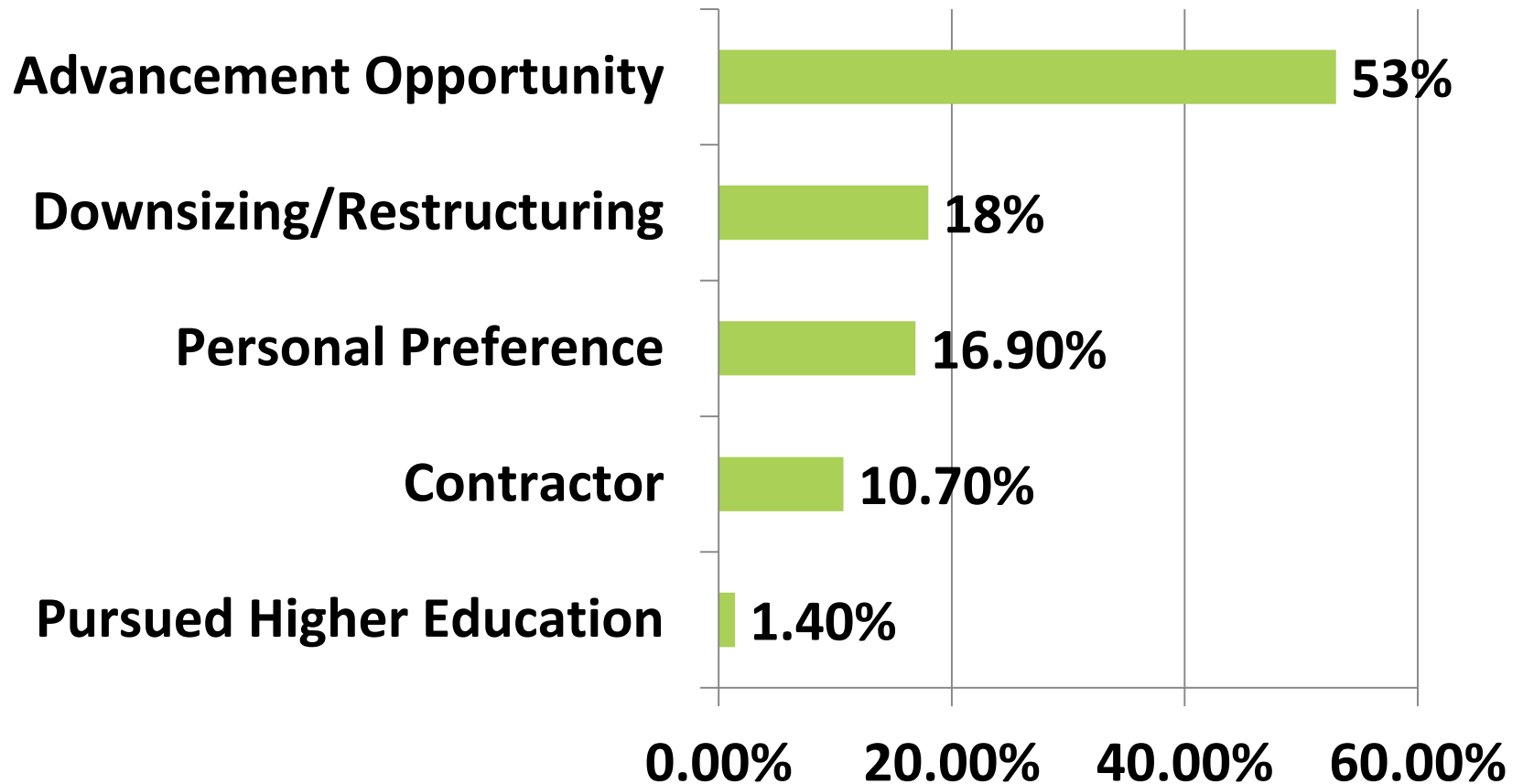
Did you change jobs this past year?



(ISC)² Career Impact Survey 2012



Why did you change jobs this year?



(ISC)² Career Impact Survey 2012

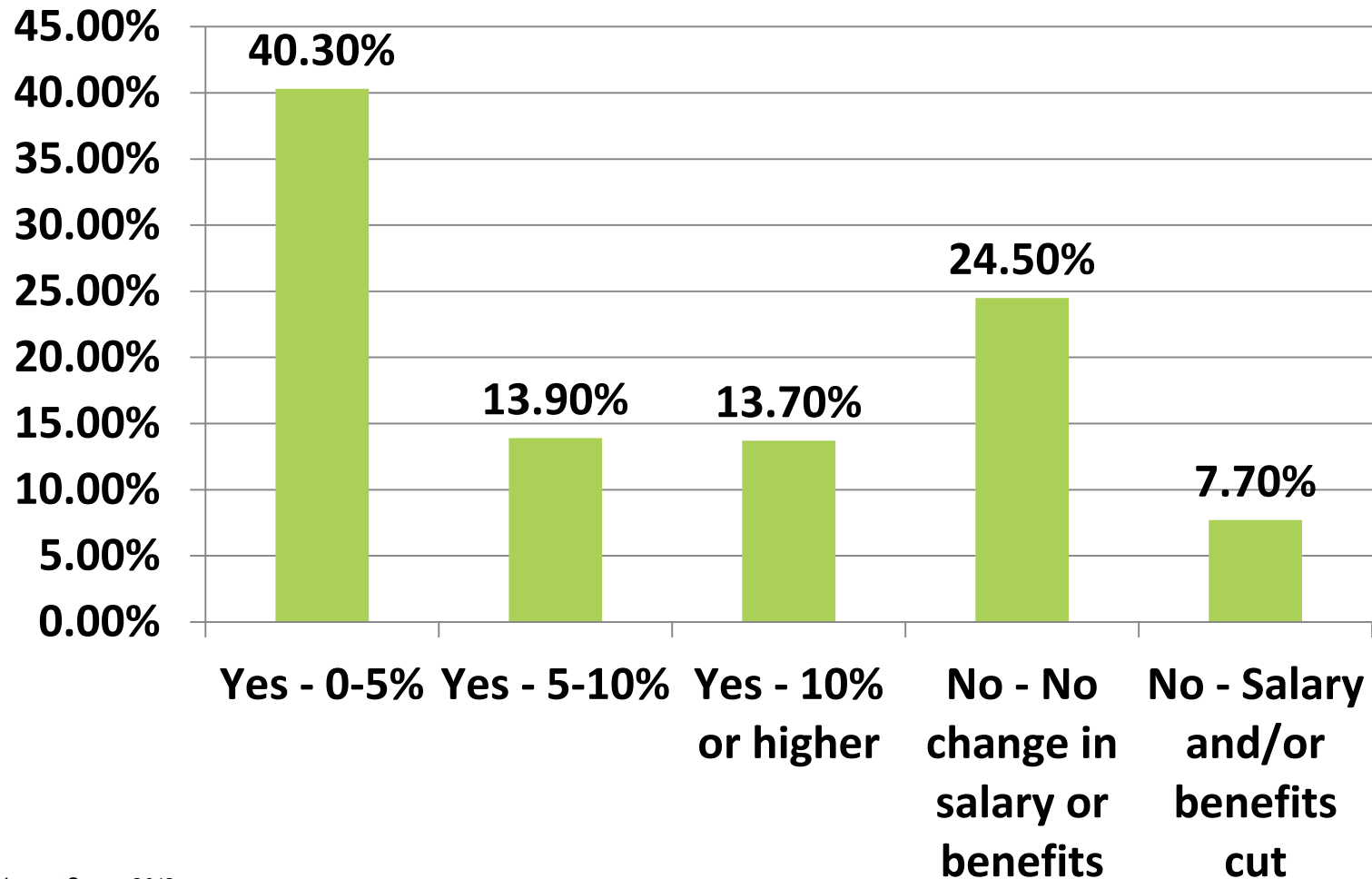


Full employment is good news

- Better opportunities for advancement and better jobs
- Better chance of salary increase



Did you receive a salary increase, including benefits and incentives, in 2011?



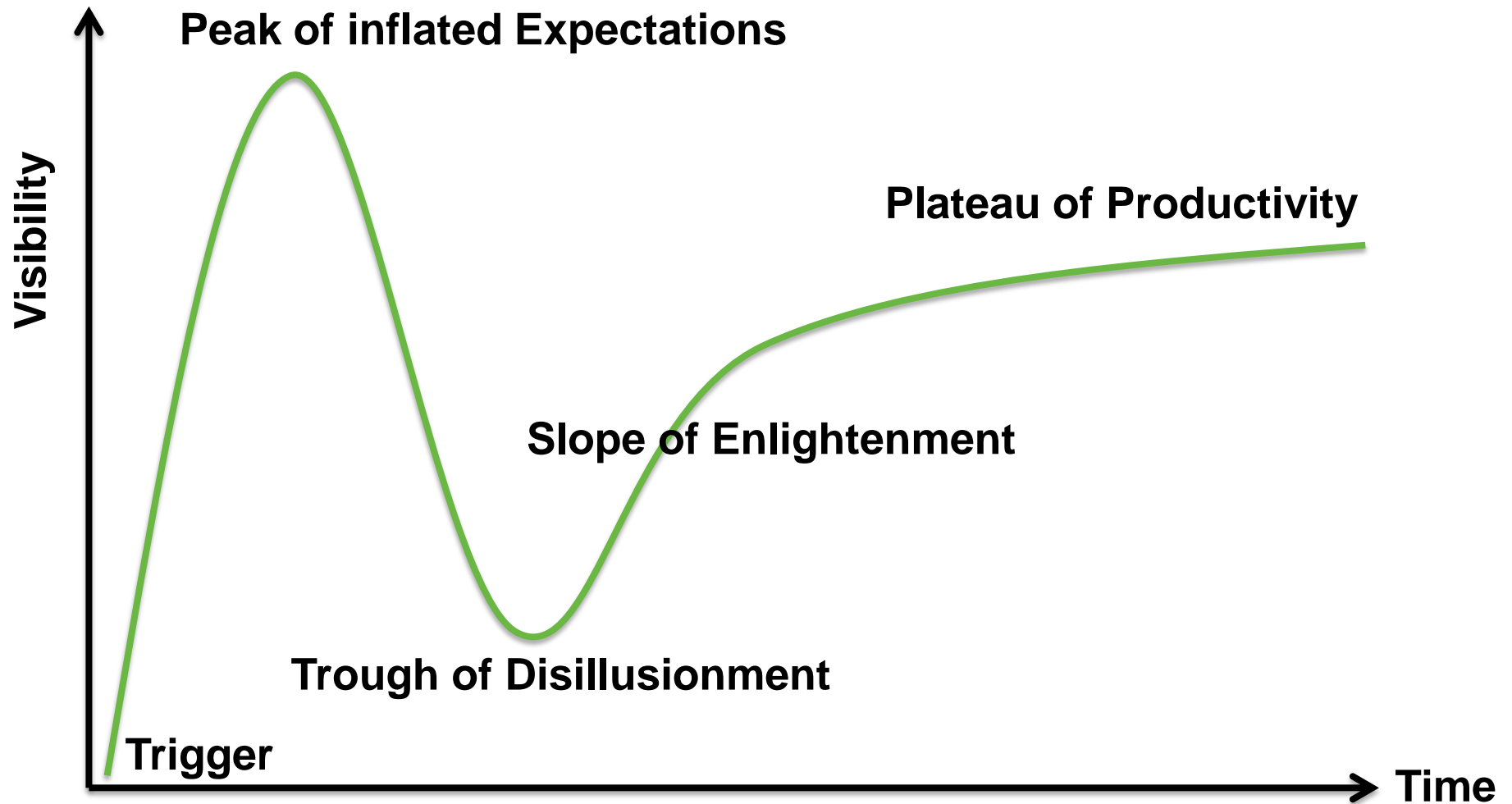
(ISC)² Career Impact Survey 2012



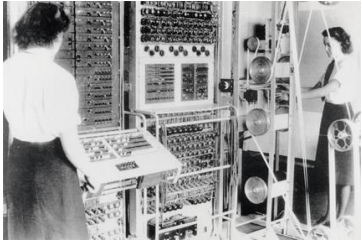
**How has
this come
about?**



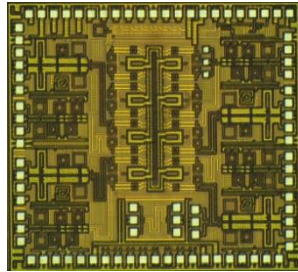
Hype curves (after Gartner)



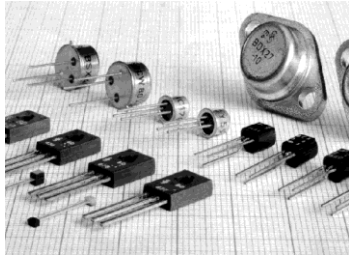
Evolution of IT



Colossus – Bletchley Park



First computers using Integrated circuits



Transistors invented



IBM 360/ICT 1960



IBM PC



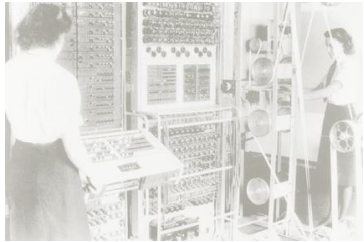
Sinclair ZX Spectrum



Worldwide Web



Evolution of IT workforce



Colossus – Bletchley Park



The Settlers



Sinclair ZX Spectrum



The Pioneers



The Commoditisers



IBM 360/ICT 1900

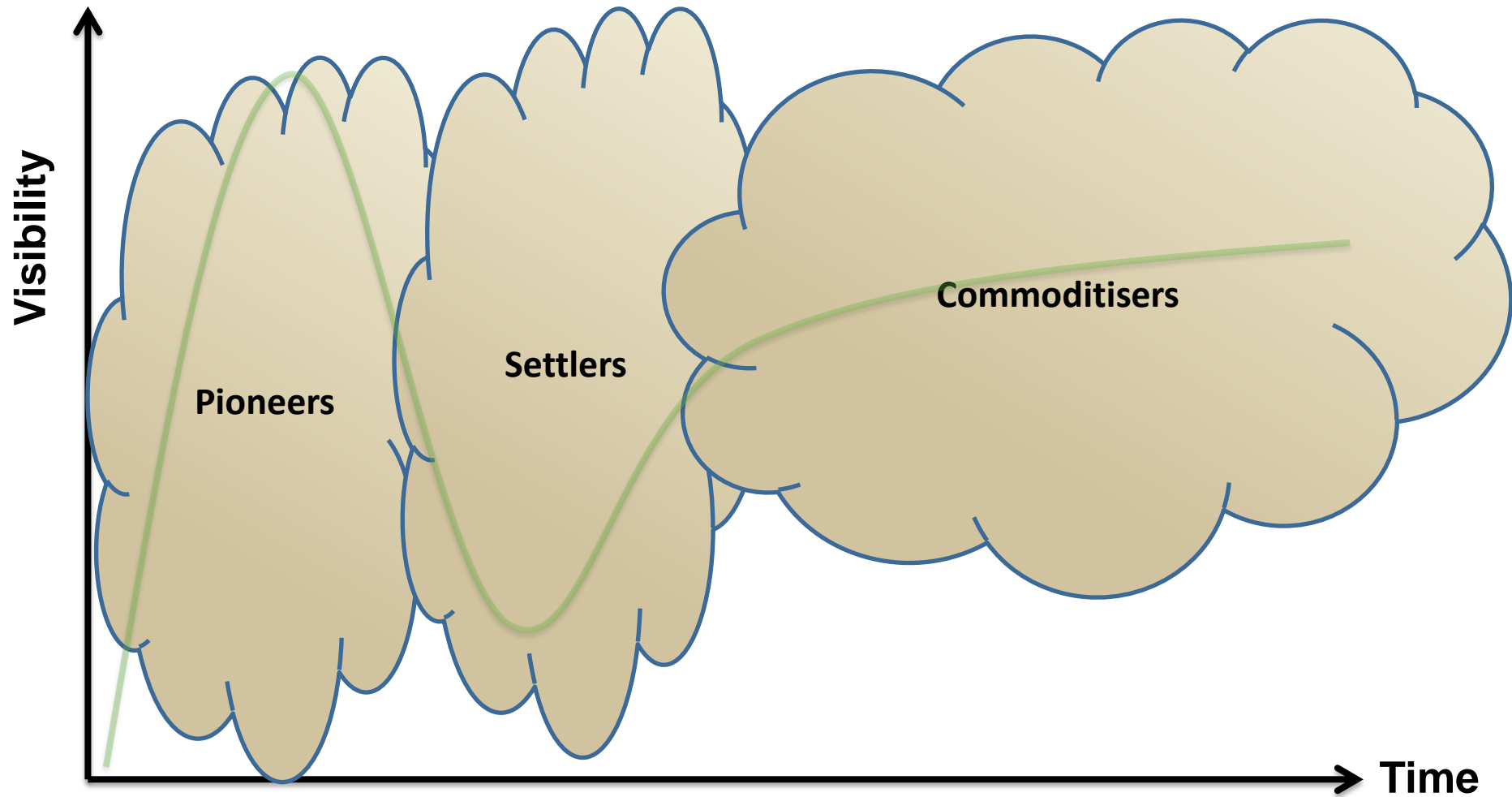


The IT workforce

- Pioneers – worked at the bleeding edge
 - Generally worked in specialist units in universities, military establishments and research centres
- Settlers - Consolidated the industry
 - Created a profession
 - Created career paths
 - Established job requirements
 - Enjoyed high salaries
 - Enjoyed full employment
- Commoditisers – Got on the bandwagon
 - Attracted by high salaries
 - Attracted by job security
 - Not always well equipped to do the job
 - Salary expectations not always met as supply exceeds demand
 - Job security not always as expected as a result of over supply



Evolution of IT workforce



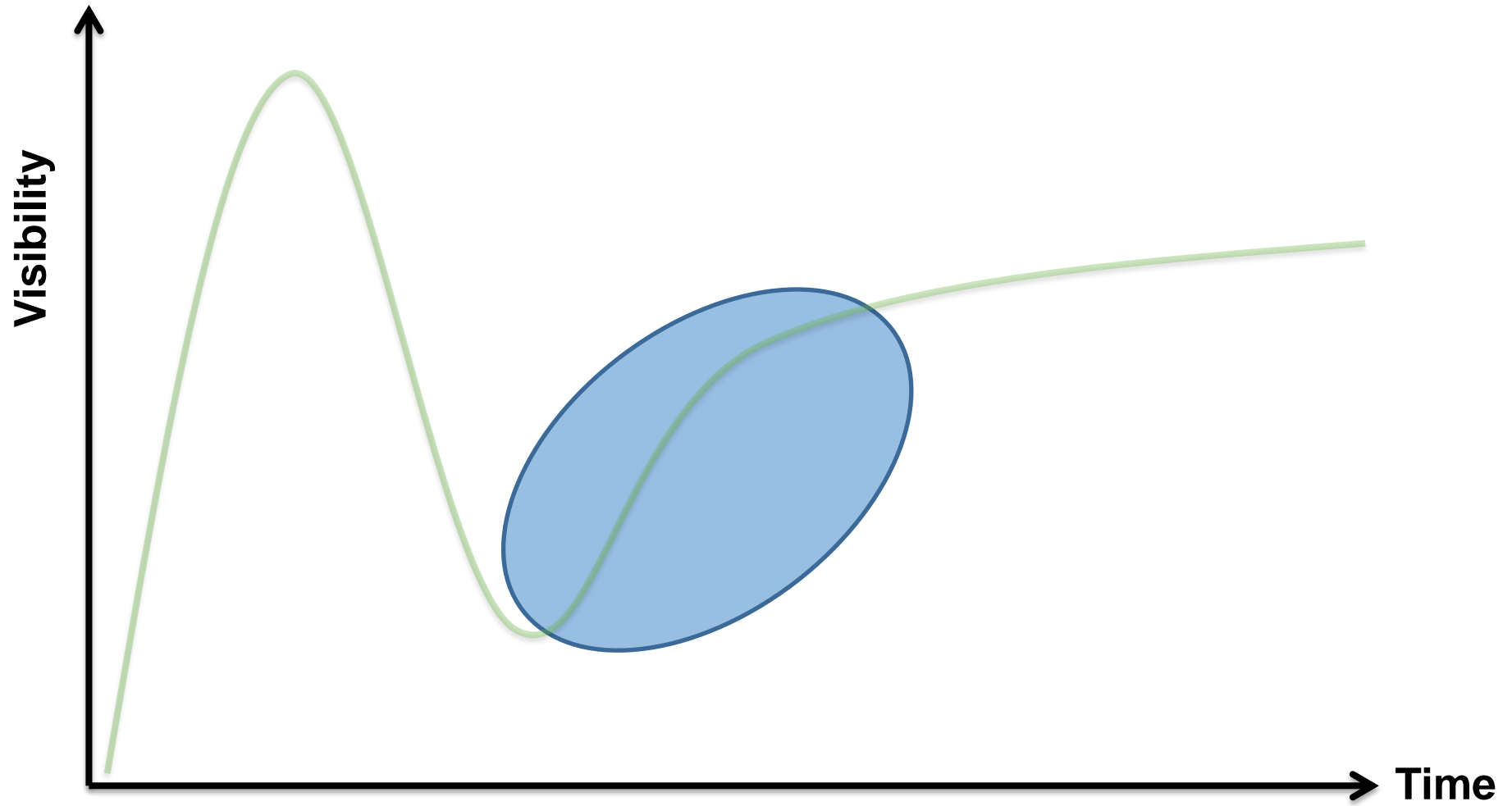
The economic circle



What is happening to Information Security?



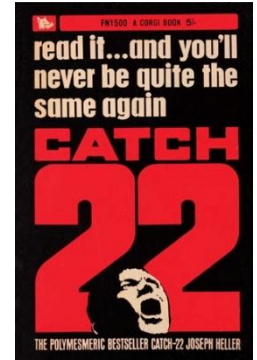
Where are we now?



The information security circle



Catch 22

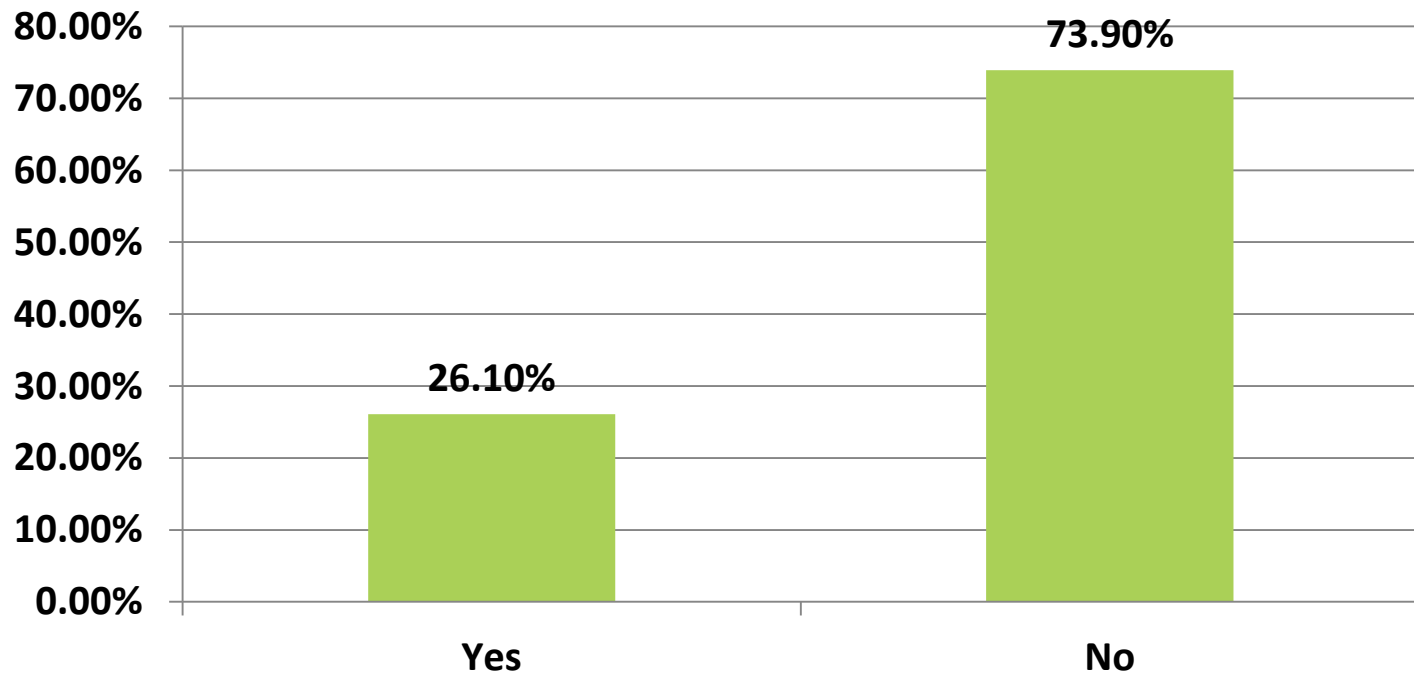


The other side of the equation

- The hiring manager



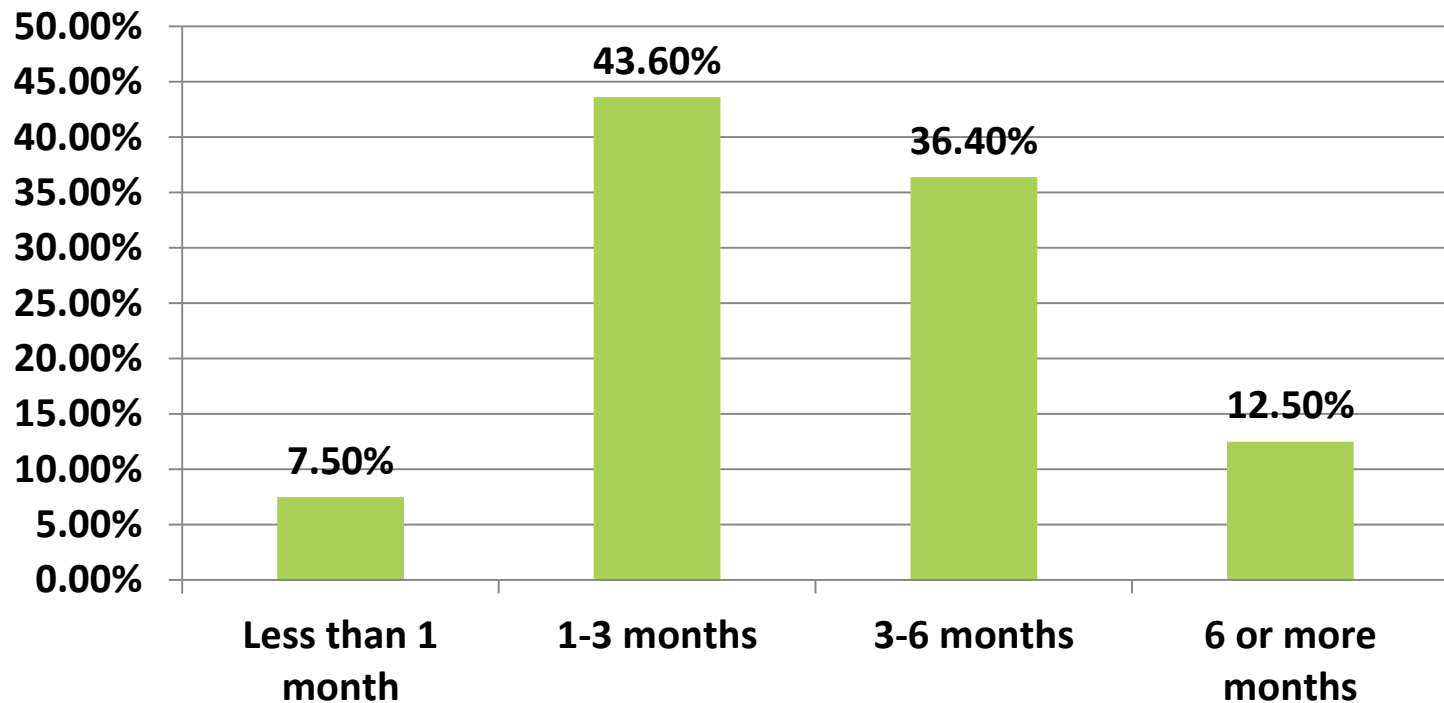
Are you a security manager or executive with hiring responsibilities?



(ISC)² Career Impact Survey 2012



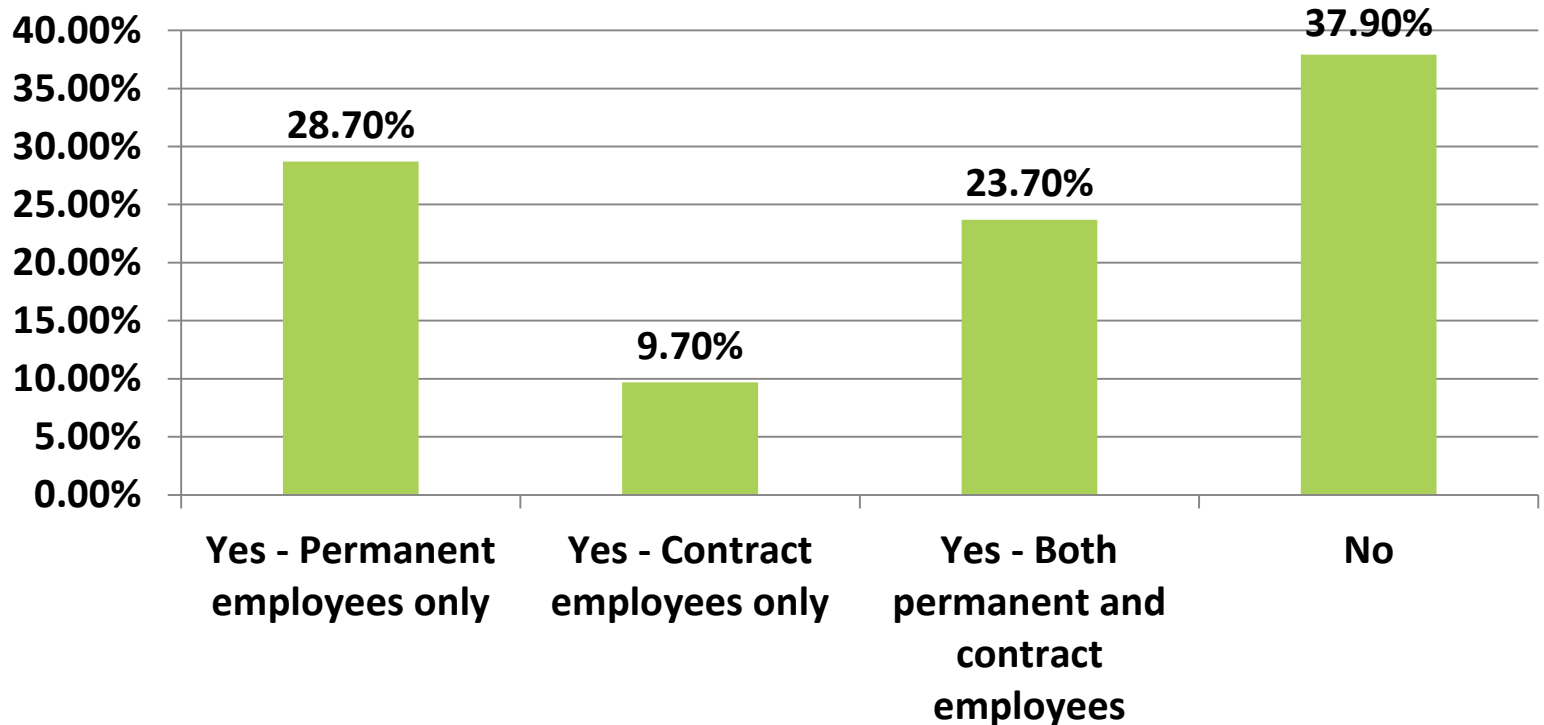
When filling an information security position within your organization, what is the average time it takes to find and hire the right candidate?



(ISC)² Career Impact Survey 2012



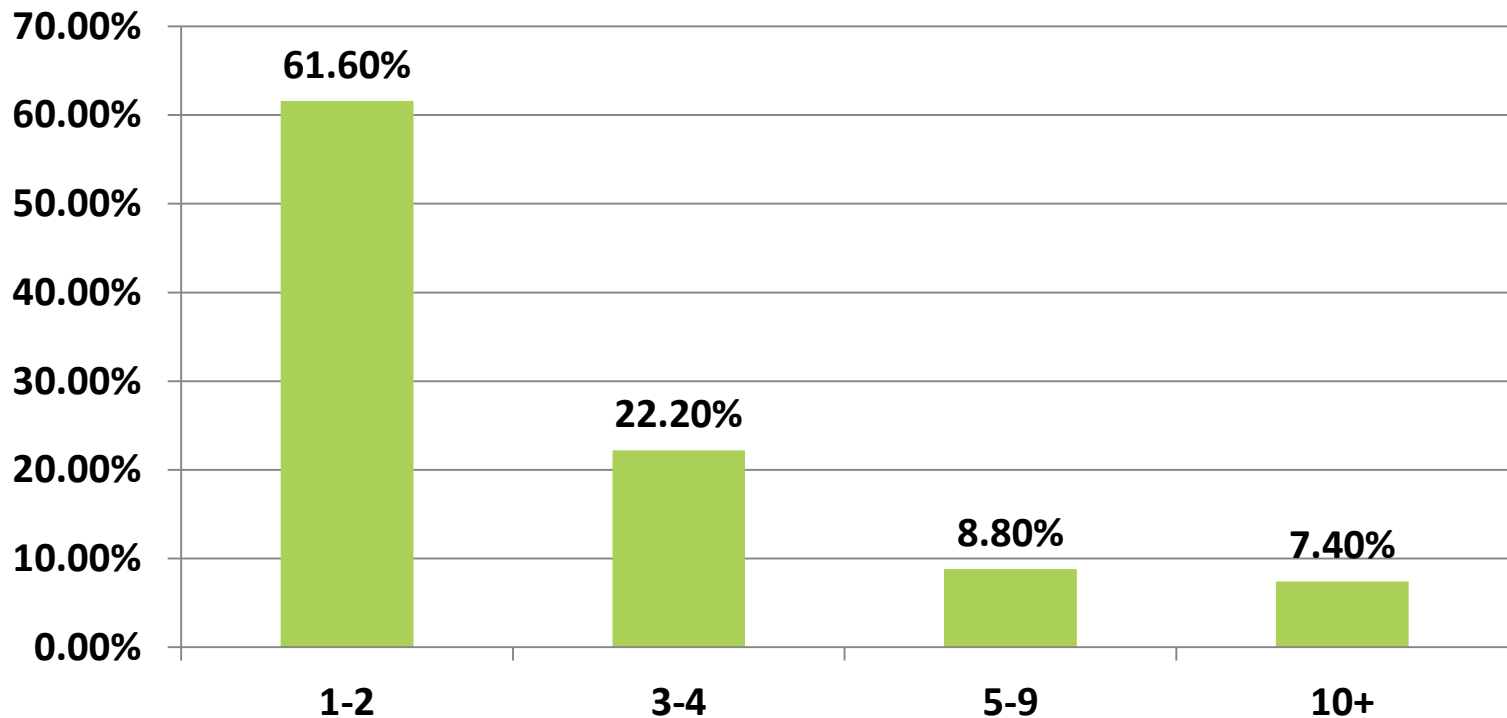
Are you looking to hire any additional permanent or contract information security staff in the coming year?



(ISC)² Career Impact Survey 2012



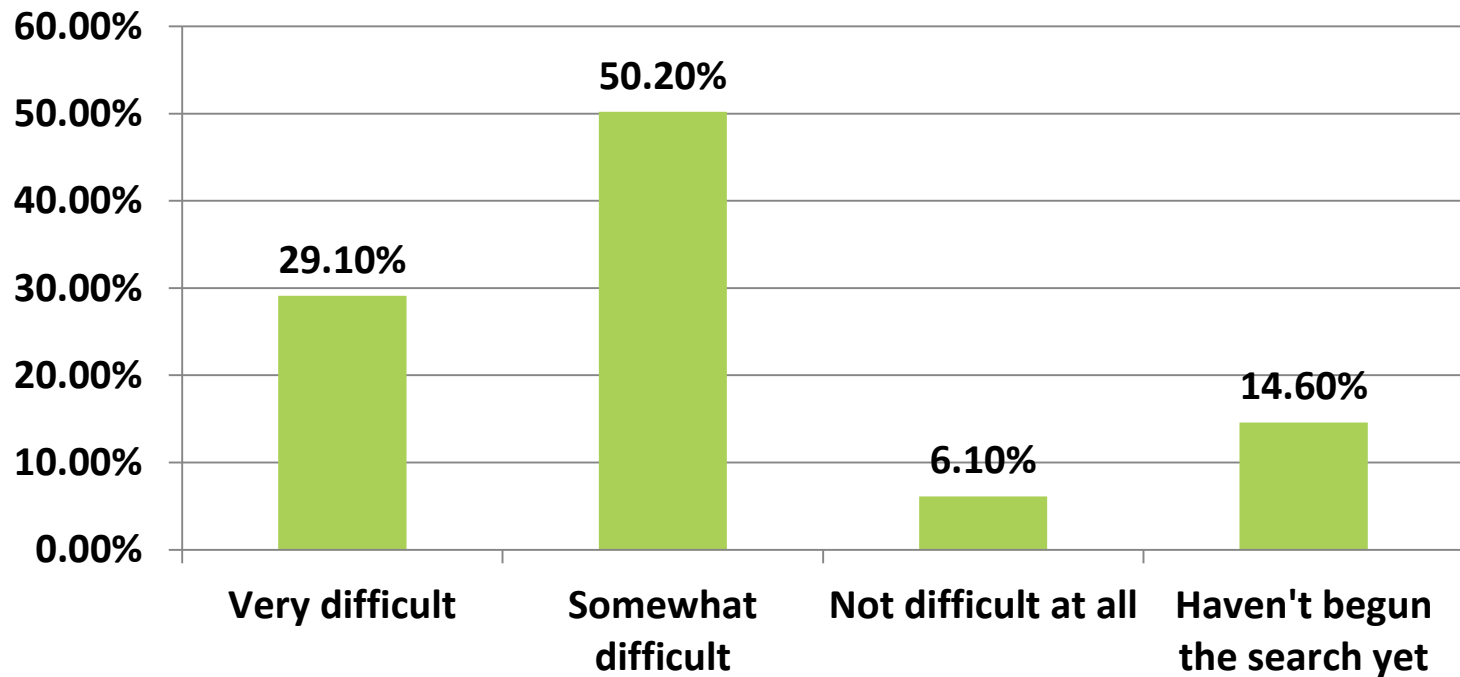
If yes, how many are you looking to hire?



(ISC)² Career Impact Survey 2012



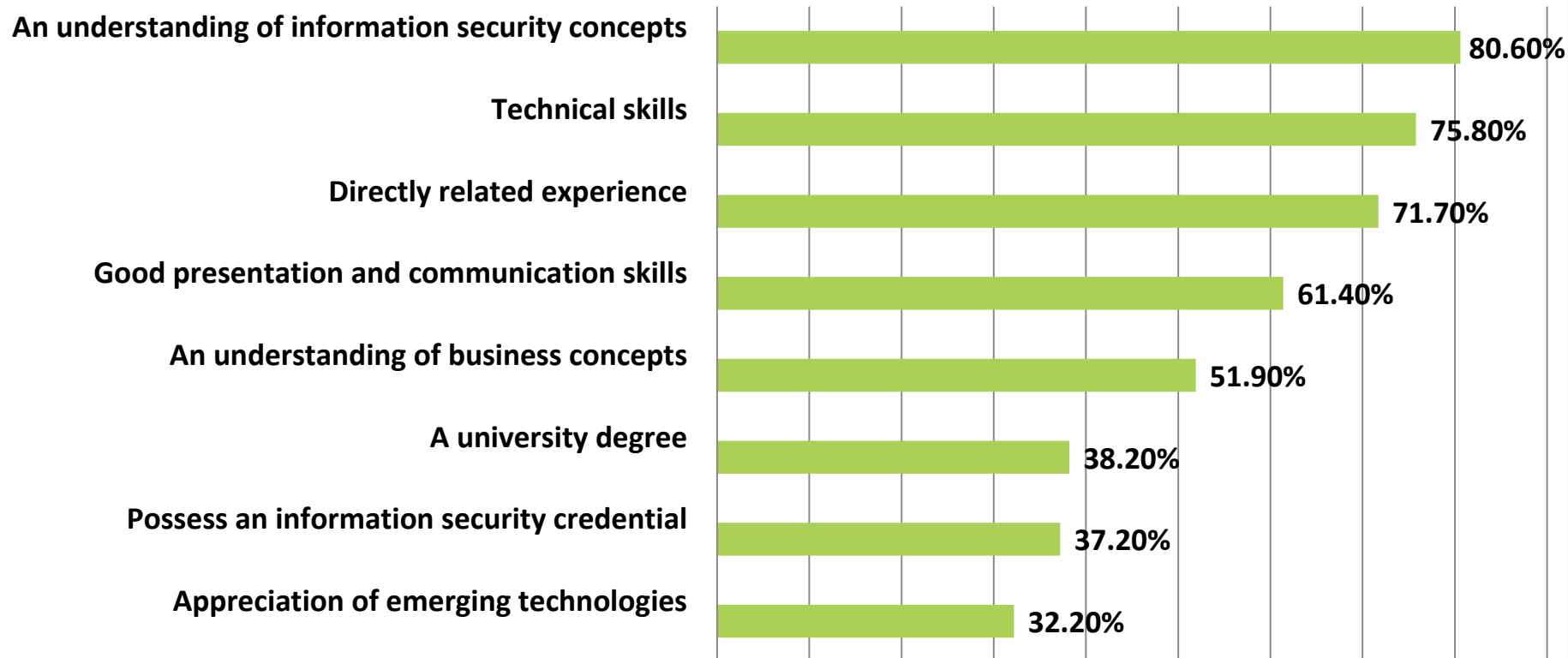
How difficult has it been to find the right candidate(s)?



(ISC)² Career Impact Survey 2012



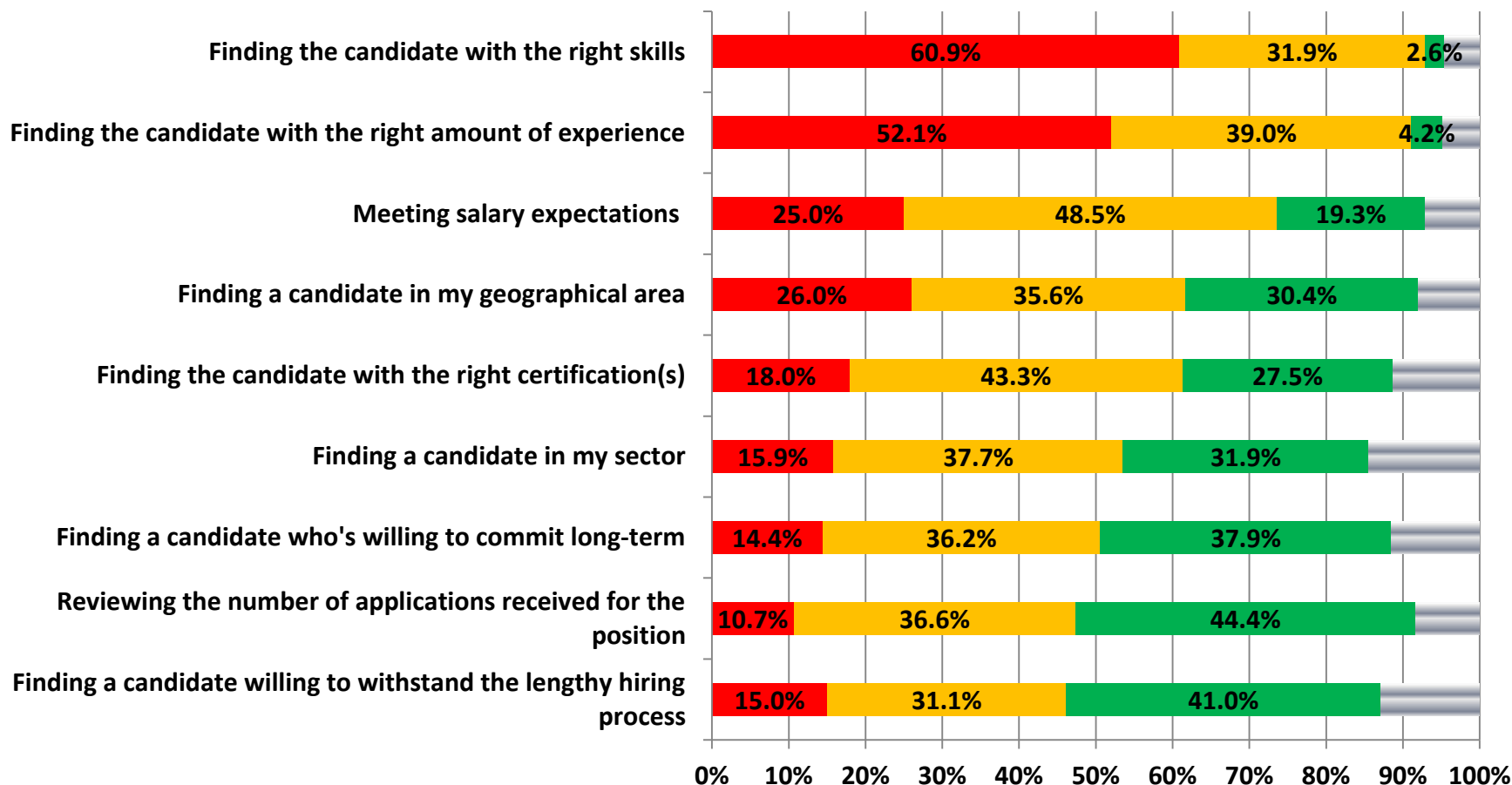
What are the most important factors in your hiring decisions?



(ISC)² Career Impact Survey 2012



What areas are most challenging in the hiring process?



(ISC)² Career Impact Survey 2012

■ Very challenging
 ■ Somewhat challenging
 ■ Not challenging
 ■ N/A



Conclusion - 3

- It's not easy to get the right people
- Skills, experience and salary expectations are the main inhibitors



Full employment is bad news

- Bad for economy
 - Causes inflationary spiral
 - Increase salary
 - Increase prices
- Bad for employers
 - Difficulty recruiting staff
 - Difficult meeting salary expectations
 - Difficult balancing budget
- Bad for employees
 - Staff shortages inhibits progress
 - Business as usual work has to be done by existing staff
 - Extra workload/stress on short staff team



What constitutes a healthy job market?

- Supply of well qualified candidates
- Adaptable workforce
- New talent entering market
- Skills keeping pace with changes in technology
- Opportunities for advancement and new experiences
- Reasonable rate of churn





**Movers
and
Shakers**



New Entrants



Job market



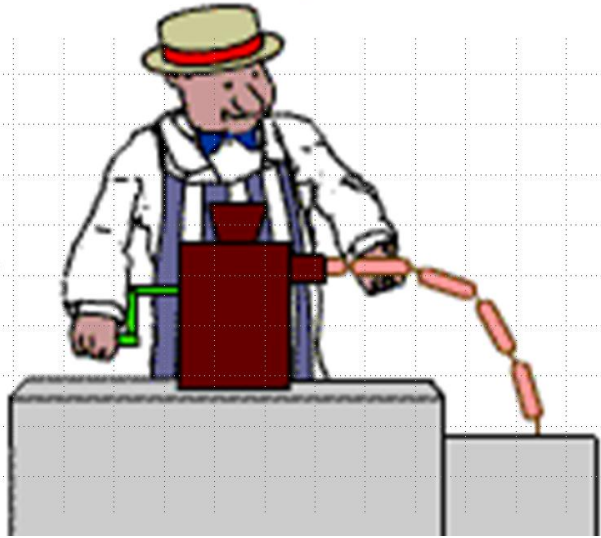
Leavers



Retirees



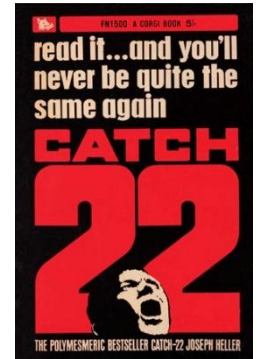
The sausage machine is not working



- Very difficult to attract new entrants
- New entrants have difficulty getting experience



Deja vu



The problem

- Employers
 - Buy in experience
 - Rather than develop talent
- Information Security as a career option
 - Poor recognition
 - Limiting supply of interested, if not yet qualified candidates



The solution?

- Boost interest
 - Show that Infosec is an interesting career choice
 - Show potential candidates that its not all about IT
- There is a huge difference between:
 - Understanding technology
 - Understanding the impact that technology can have
 - Strategic thinking and management instincts rather than deep technical knowledge.
- Support to develop interest



What are we doing?

- Encouraging people to consider Infosec as a career choice
 - Cybersecurity challenge
 - University initiatives
- Setting up programmes to give new entrants appropriate experience and mentoring
 - Major consultancies getting better at this
- Providing support for new entrants in the field
 - Networking groups for new people
 - Chapters
 - NetSec



Summing up

- Workforce likely to double in the five year horizon
- Demand has consistently increased over past 7 years
- Unemployment less than 4%
- Need to improve health of job market by encouraging new entrants
- Need to have schemes to support new entrants



Curates egg - good in parts

- The good
 - Higher salaries
 - Year on year salary increases
 - Opportunities for advancement outside current employer
 - Good employment security
- The bad
 - Macro
 - Overall bad for economy
 - Difficulty recruiting
 - Difficult meeting salary expectations
 - Individual
 - Potential extra workload and stress
 - Can inhibit career progress



After the conference

- Think about how all this affects you
- Think about what you might want to do about it
- Do it!

Questions?

