Council for Access to the Profession of Engineering (CAPE)

PRESENTATION MADE TO ENGINEERS ASSOCIATION OF BANGLADESH IN HAMILTON

25TH June 2006

Council for Access to the Profession of Engineering (CAPE)

- Striving to ensure that IEBs can achieve their maximum potential to contribute to their communities, province, Canada and the world
- Through utilization and application of their engineering knowledge and skills and by upgrading these to suit emerging trends in engineering
- Aims to become an Independent Ontario based membership Association for Immigrants with Engineering Backgrounds (IEBs)

THE COUNCIL FOR ACCESS TO THE PROFESSION OF ENGINEERING (CAPE)

Evolving membership based organisation for the following categories of immigrants with engineering backgrounds living in Ontario

- *Over 1000 Members from across the province*
- *coalition of some 15 existing and evolving community engineering associations (with an estimated 10 to 12 thousand members)*
- *Potential new entrants (estimated at over 10,000 per year)*

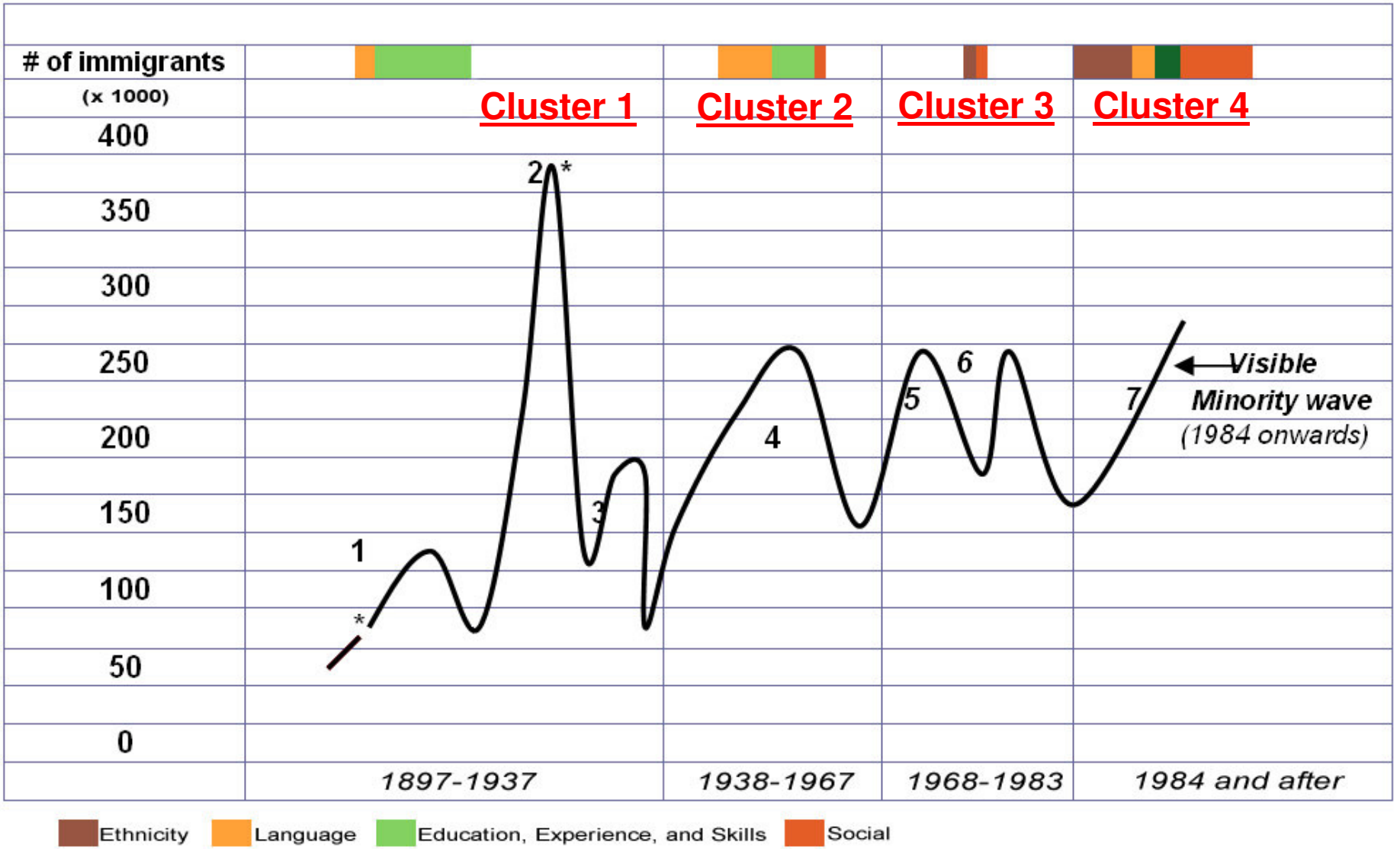
'ENGINEERING ACCESS' COMMUNITY ACTION PROJECT

- *Participatory Action Research*
  - *intervention, development and change within communities*
- *Systematic Integrated and Strategic Approach (SISA)*
  - *a situation analysis;*
  - *multi-stakeholder engagement*
  - *Strategic Action Planning – Employment Strategy for immigrants with engineering backgrounds*

WHY IS CHANGE NEEDED?

- By Region
- Range of qualifications
- Range of disciplines
- Length of stay
- Years of experience
- Employment status

SITUATION ANALYSIS
CANADIAN 'EXPERIMENTS' IN DIVERSITY



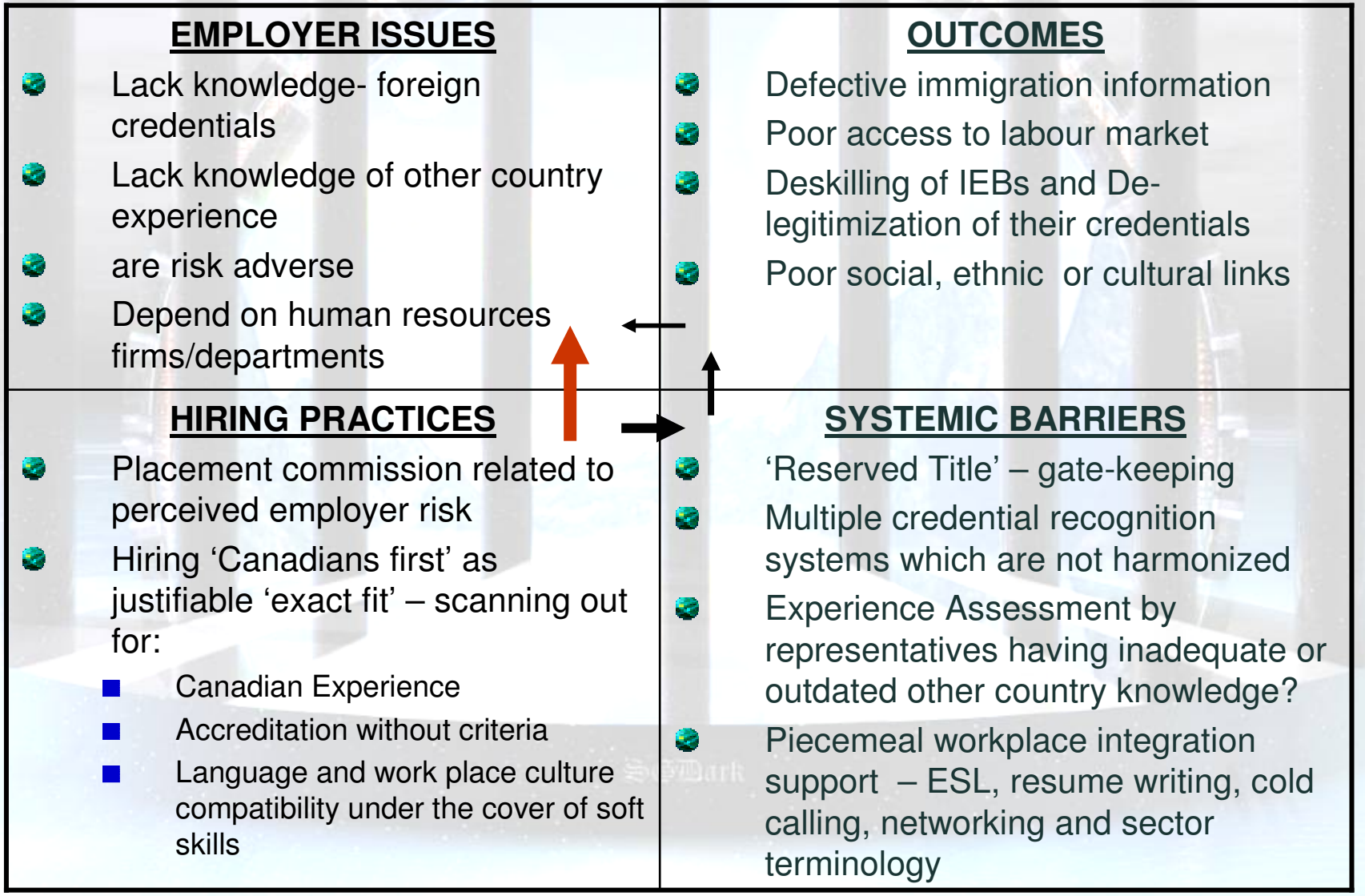
CLUSTER 4: 1986 AND AFTER

- Global from non-traditional source countries
  - Social and ethnic disconnect
- Points geared to higher education and experience
  - Tenfold increase in IEBs (Competition)
  - No pre-arranged employment
- More educated and experienced than host population
- Regulation
  - Protection of life, health, property and public welfare introduced into licensing in 1984 by PEO
  - Experience accreditation and 'Canadian Experience' introduced into licensing by PEO in 1990 (gate-keeping)
- Employment support for non-skilled workers and refugees adapted extended to IEBs to bridge assumed 'deficit' ?
  - Translated into ESL, LINC
  - Bridge training, employment preparation **courses**

KEY FINDINGS

- Skilled immigrants leading edge of labour migration under globalization.
- Global marketplace access function of trade agreements and reduction of protectionist tariffs
- Global labour pool access Vs government's historical role of protecting its population from competition for domestic employment positions
- In Ontario an assumption of deficiency of foreign credentials fuels protection of its population from competition through:
  - Employers who averse to foreign credentials and experience
  - non-merit based hiring practices and systemic regulatory, employment and institutional barriers to the labour market integration
- Immigrants with engineering backgrounds locked out of the profession are first victims of this failure
- Canada through its falling productivity is the second victim of this failure
- The Case for a transition of focus from 'Canadians first' to 'Canada first.' is strong.

CURRENT MODEL:CANADIANS FIRST



KEY RECOMMENDATIONS

- Fair, transparent, non-discriminatory and no more burdensome than necessary regulation
- Moving beyond risk adversity to embrace change
- Serious commitment to principles of equity and equality of employment outcomes
- Broader stakeholder consultation for an integrated, coordinated and seamless settlement process

BROADER MULTI-STAKEHOLDER CONSULTATION

- *The Approach - Constructive engagement*
  - *Bring together people with different views*
  - *Create meaningful and timely discussion*
- *Initiating Constructive Engagement*
  - *Multi-stakeholder forum*
  - *Launch of Roundtables*
- *Multi-stakeholder consultation to develop a unified approach to solving the issues – 6 Roundtables*
- *Arriving at jointly owned output by all stakeholders – Employment Strategy for IEBs*

CAPE'S MULTI-STAKEHOLDER ROUNDTABLE CONSULTATION PROCESS

- *Four roundtables have been held to date to develop a multi-stakeholder employment strategy for immigrants with engineering backgrounds: The structure of the roundtables is as follows:*
  - *Roundtable 1 - Inevitability of Change*
  - *Roundtable 2 - Integrating Stakeholder Employment Strategies and Approaches*
  - *Roundtables 3 and 4 - 'Understanding Roles And Responsibilities'*
  - *Roundtable 5 will identify expected outcomes and performance measures*
  - *Roundtable 6 will be the launch of the multi-stakeholder employment strategy*

ROUNDTABLE PARTICIPANTS

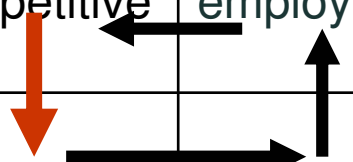
- *The roundtable participants include:*
  - *Federal, Provincial and local government representatives*
  - *PEO, OACETT, OSPE and CCPE*
  - *14 employers (Large, medium and small)*
  - *Recruiters, newcomer service providers, universities and community colleges*
  - *Community engineering associations and immigrants with engineering backgrounds*
  - *The media*
  - *Trade Unions and others*

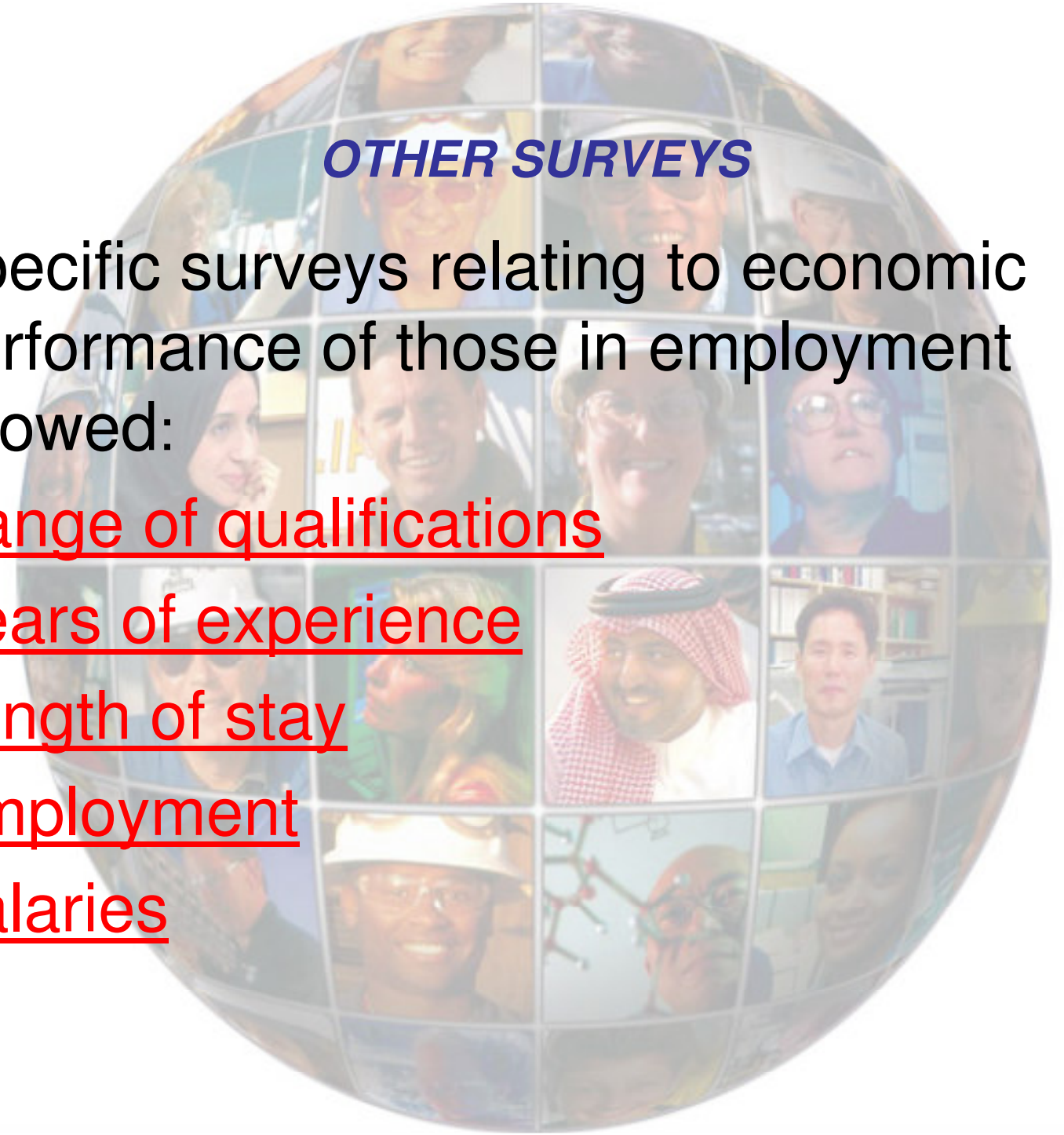
EMPLOYMENT STRATEGY

- ***SYSTEMIC CHANGE***
  - *Process change*
  - *Governance*
  - *Labor market information*
- **LABOUR MARKET**
  - *Informed Decisions*
  - *Education and training*
- **SUPPORT SERVICES**
  - *Licensing, Mobility and Accreditation*
  - *Employer Risk adversity and training by professional engineers*
  - *Standards and regulation*
- ***SUPPORT SERVICES***
  - *Communities and Networks*
  - *Economic Realities and Empowerment*

PROPOSED MODEL – CANADA FIRST

EMPLOYERS	**EXPECTED OUTCOMES**
Embrace change Move to tap into global marketplace Utilize global knowledge and skills pool within their easy reach Aim to increase productivity Aim to become globally competitive	Relevant employment supports Shared global work culture Strong information sharing Socially cohesive world class workforce Equitable skills-commensurate employment outcomes
HIRING PRACTICES	**SYSTEMIC BARRIERS**
Merit and global competency based frameworks and scanning processes Licensing upon the basis of NAFTA, GATS and other emerging free trade agreement requirements Communication rather generic language skills	Acknowledge global Range of 'Titles' Harmonize foreign credential recognition systems Professional Development focusing on Cross cultural experience and emerging paradigms Broaden public consultation processes to engage all stakeholders

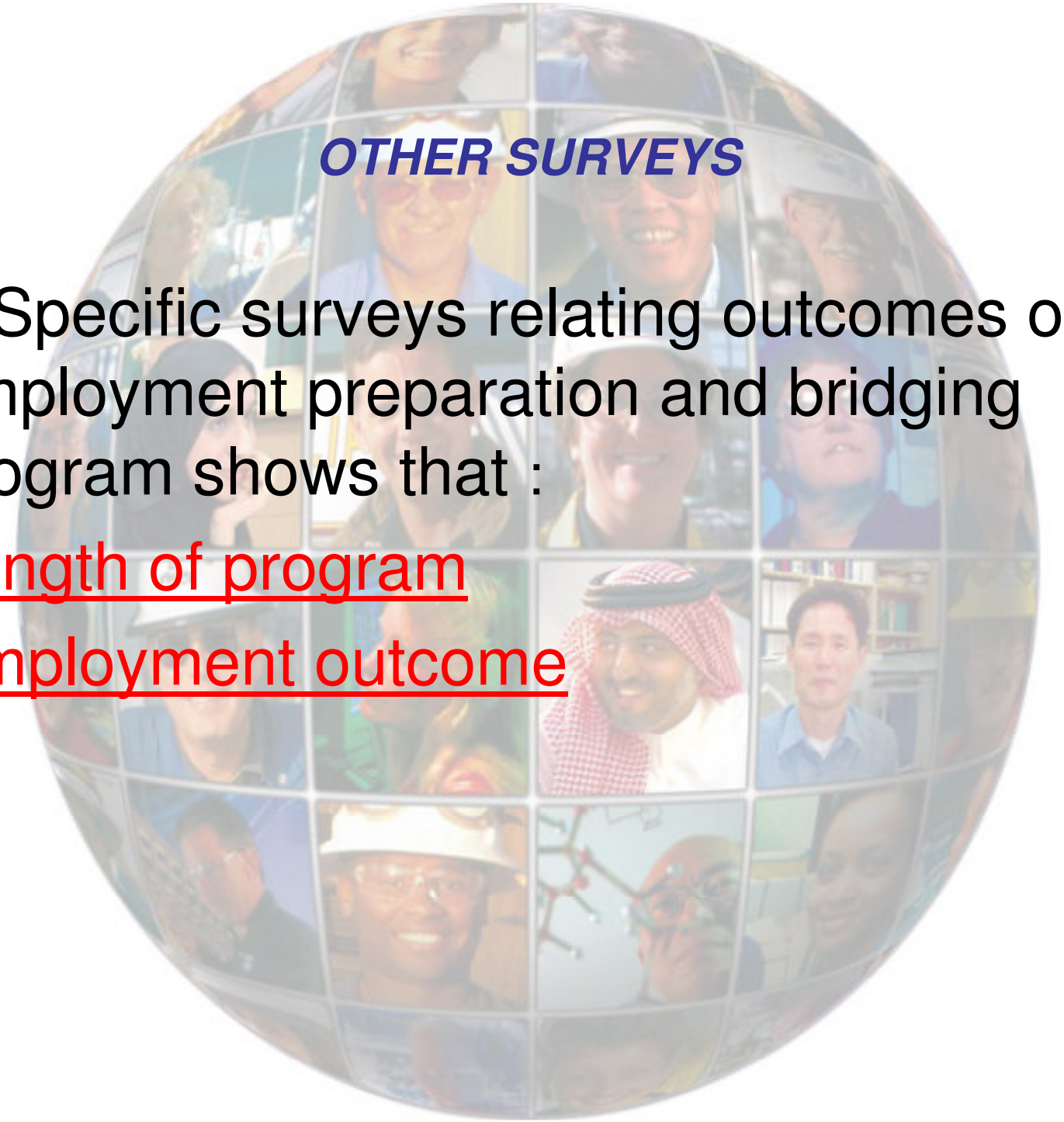




OTHER SURVEYS

Specific surveys relating to economic performance of those in employment showed:

- Range of qualifications
- Years of experience
- Length of stay
- Employment
- Salaries



OTHER SURVEYS

A Specific surveys relating outcomes of employment preparation and bridging program shows that :

- Length of program
- Employment outcome

CLUSTER 1: 1897-1937

- Preferred source countries – white commonwealth
  - Britain, United States, Newfoundland, South Africa, Irish Free State, New Zealand, Australia
- Wave 1: Miners, engineers and scientists
  - set up Canadian Society of Civil Engineers (CSCE) to control supply of engineers
- Wave 2: WW1Refugees and Returning Military engineers led to competition
  - CSCE devolved to provinces leading to formation of Professional Engineers of Ontario in 1922
  - Licensing made mandatory 1937
- Wave 3: Unskilled workers and refugees
  - Voluntary settlement organizations setup in response to language disconnect

CANADIANS FIRST

"There is certainly no objection to men from other countries coming to Canada and taking up their abode here. … On the other hand, it will be found that there is strong objection to foreign consulting engineers doing work in this country which can be done equally well by our own engineers" (Editorial, *CE*, 1912: 269).

CLUSTER 2: 1938-1967

- 'Non-preferred' source countries
  - Eastern and Southern Europe
- Wave 4: Refugees WWII, unskilled workers (trades and technicians) and few professionals
  - Reserved title for Engineers introduced by PEO to set apart Engineers and technicians (gate-keeping)
  - Academic accreditation
- Certification of technicians initiated by PEO
  - OACETT set up in 1961
- Underutilization of skilled tradespersons
  - Voluntary ethno-cultural community settlement organizations e.g COSTI (1961) set up to provide training and retraining or language training and bridging education (Polish engineers)

TECHNICIANS NOT PROFESSIONALS

*"A terrific number of applications are being received from non-graduates; many of whom should not apply for professional standing but in all probability would make excellent **engineering** technicians" (Executive Director to PEO Council, October, 1956 raising the possibility of an engineering technicians association)*

BACK

CLUSTER 3: 1968-1983

- Non-preferred and non-traditional source Countries
  - Mostly European; and
  - a few from countries
- Bill of Rights (1960) and Charter of rights (1982)
- Wave 6 – Skilled workers based on point system
  - Prearranged Employment for skilled workers
- Education or language disconnect irrelevant
- Settlement services formally handed over to voluntary and ethno-cultural community organizations
  - mandate extended to include employment support for non-skilled workers and refugees.

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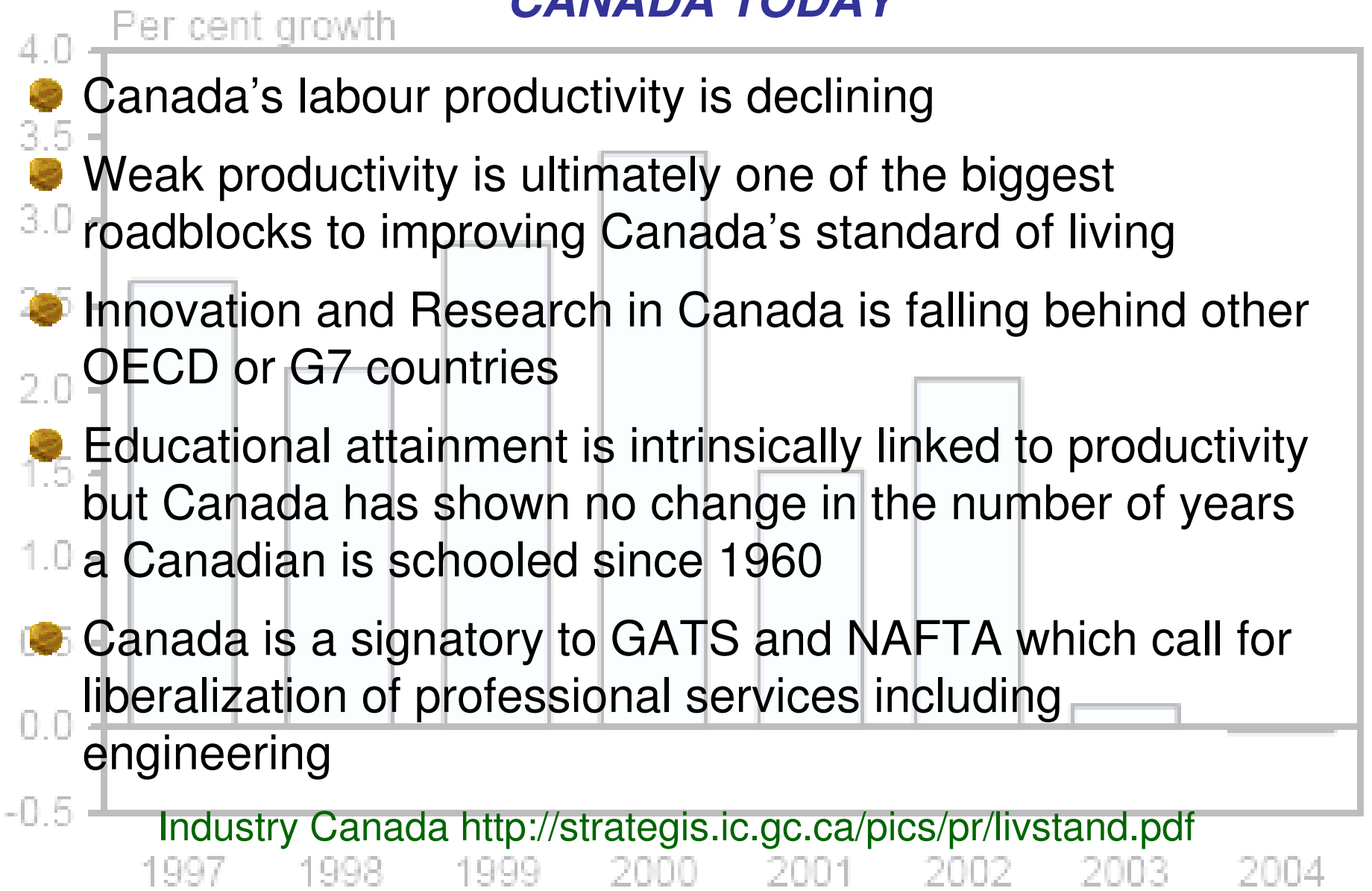
CANADA TODAY



- Canada's labour productivity is declining
- Weak productivity is ultimately one of the biggest roadblocks to improving Canada's standard of living
- Innovation and Research in Canada is falling behind other OECD or G7 countries
- Educational attainment is intrinsically linked to productivity but Canada has shown no change in the number of years a Canadian is schooled since 1960
- Canada is a signatory to GATS and NAFTA which call for liberalization of professional services including engineering

Industry Canada http://strategis.ic.gc.ca/pics/pr/livstand.pdf

CANADIANS FIRST?

"OSPE will continue to advocate for the interests of the 66,000 licensed professional engineers in Ontario, as well as those seeking licensure. We're committed to supporting and encouraging the interests of engineers and engineering students, wherever they received their education. We view the potential over-supply, under-employment and under-utilization of professional engineers as some of the most serious issues facing our membership….." (Open letter to the Prime Minister, March 18, 2004 by the Ontario Society of Professional Engineers (OSPE))

BACK

CANADA AND THE WORLD

"In all likelihood, the Canadian federal government will be pressured into making PEO an offer that it cannot refuse. Either PEO agree to harmonize its admissions standards with the rest of the world, or the engineering profession will be partially or entirely deregulated. After all, if the rest of the world doesn't need the protection afforded by a strict regulation of engineering, why does Canada?"

- Norbert Becker ([1]) (President, The Becker Engineering Group, A PEO Councilor-At-Large and the Chair of the PEO Globalization Strategic Planning Task Group)

[1] Norbert Becker, P.Eng (1998). It's time to change the federal government's tendency to enact trade agreements on services without consulting the engineering profession. Engineering Dimensions March/April 1998

CHALLENGES AHEAD

- *Protection of domestic employment opportunities has been an historical need*
- *Globalization and increased competition from emerging economies such as China and India*
- *Great pressure to facilitate borderless access to markets and labour pools*
- *We are midst a transition from 'Canadians First' to 'Canada First'*
- Immigrants are key drivers of this transition

IEB Survey- Range of disciplines

Engineering Discipline	Number
Civil Engineering	177
Electrical and Electronics Engineering	162
Mechanical Engineering	154
Engineering Managers	82
Industrial and Manufacturing Engineering	72
Chemical Engineering	56
Software Engineering	32
Electrical and Electronics Engineering Technologists and Technicians	30
Geological Engineering	6
Railway and Yard Locomotive Engineering	6
Civil Engineering Technologists and Technicians	25
Computer Engineering (Except Software Engineering)	29

Next

IEB Survey- Range of disciplines (Continued)

Engineering Discipline	Number
Metallurgical and Materials Engineering	21
Engineering Inspectors and Regulatory Officers	16
Industrial Engineering and Manufacturing Technologists and Technicians	15
Petroleum Engineering	14
Aerospace Engineering	13
Mechanical Engineering Technologists and Technicians	13
Mining Engineering	9
Engineering Officers, Water Transport	8
Stationary Engineering and Auxiliary Equipment Operators	7
Geological Engineering	6
Railway and Yard Locomotive Engineering	6
Other Professional Engineering, n.e.c.	35

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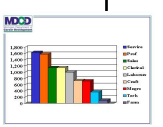
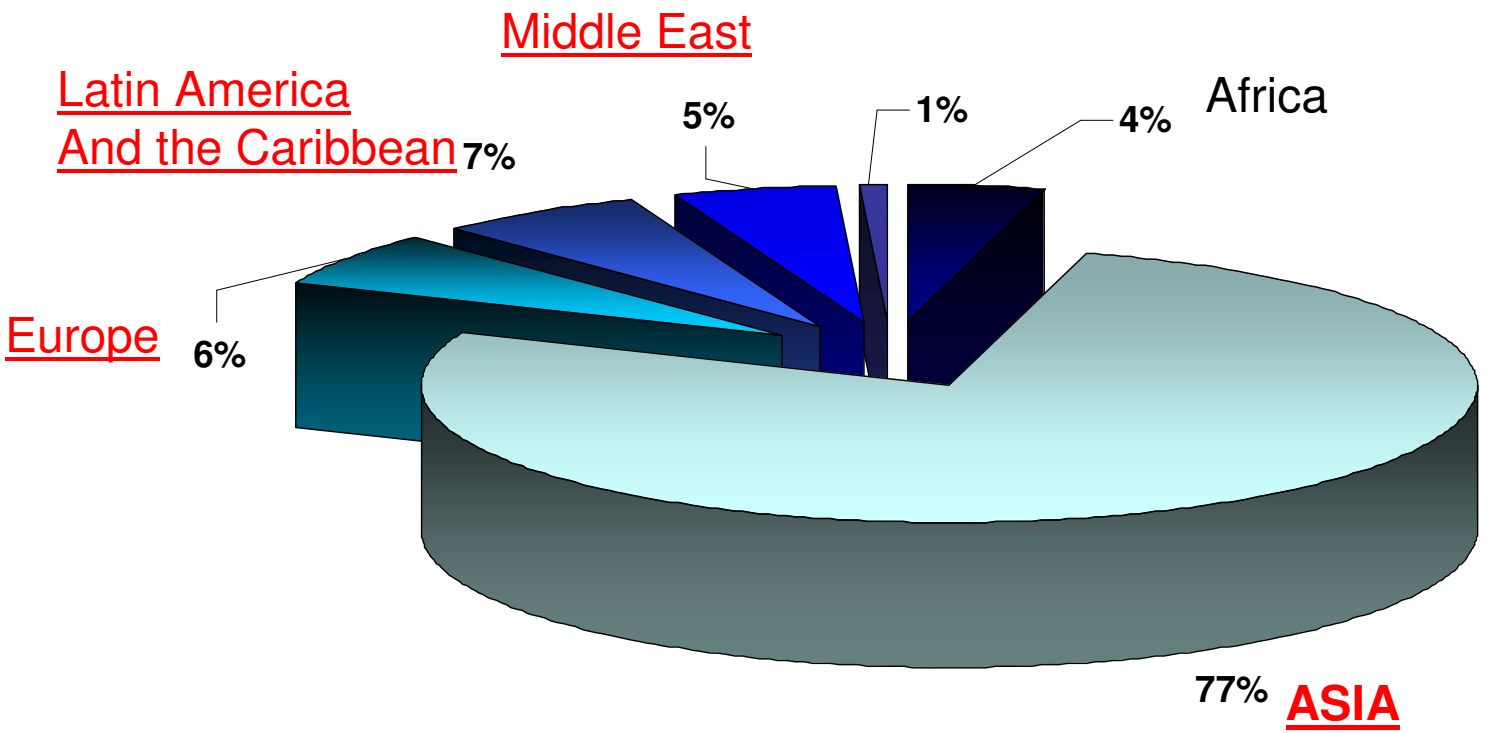
chart



IEB survey- Number of members from different regions



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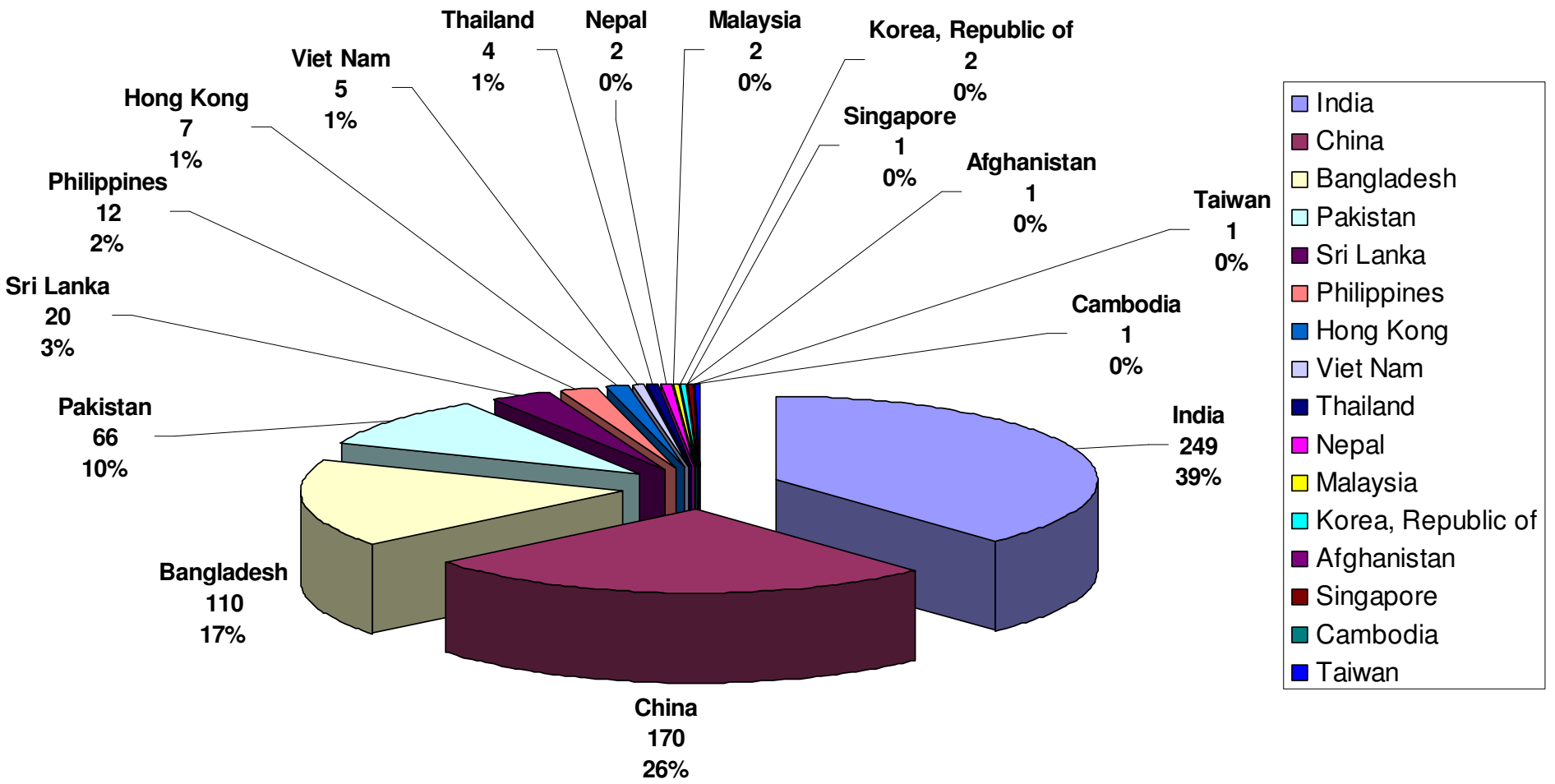
Members from Asian countries



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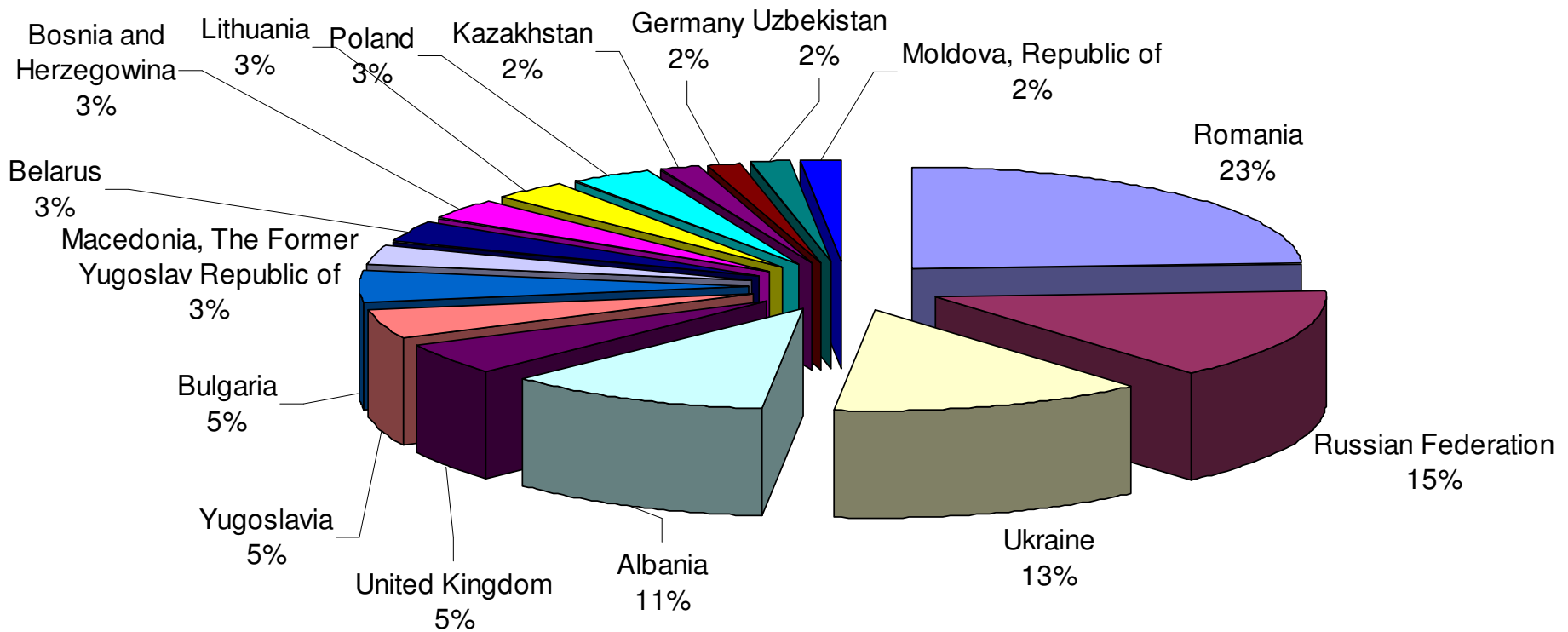
Members from European countries



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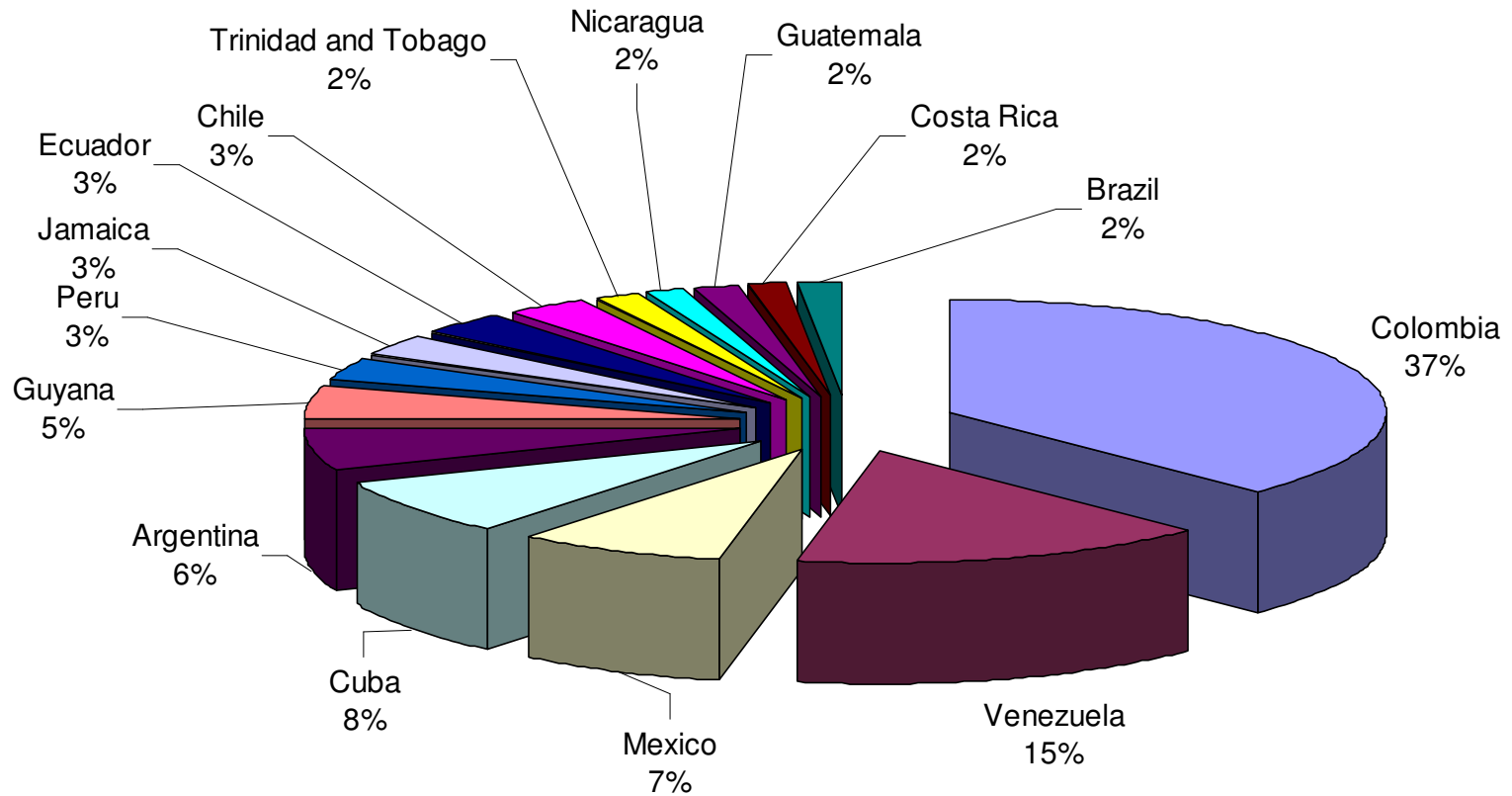
Members from Latin American and the Caribbean countries



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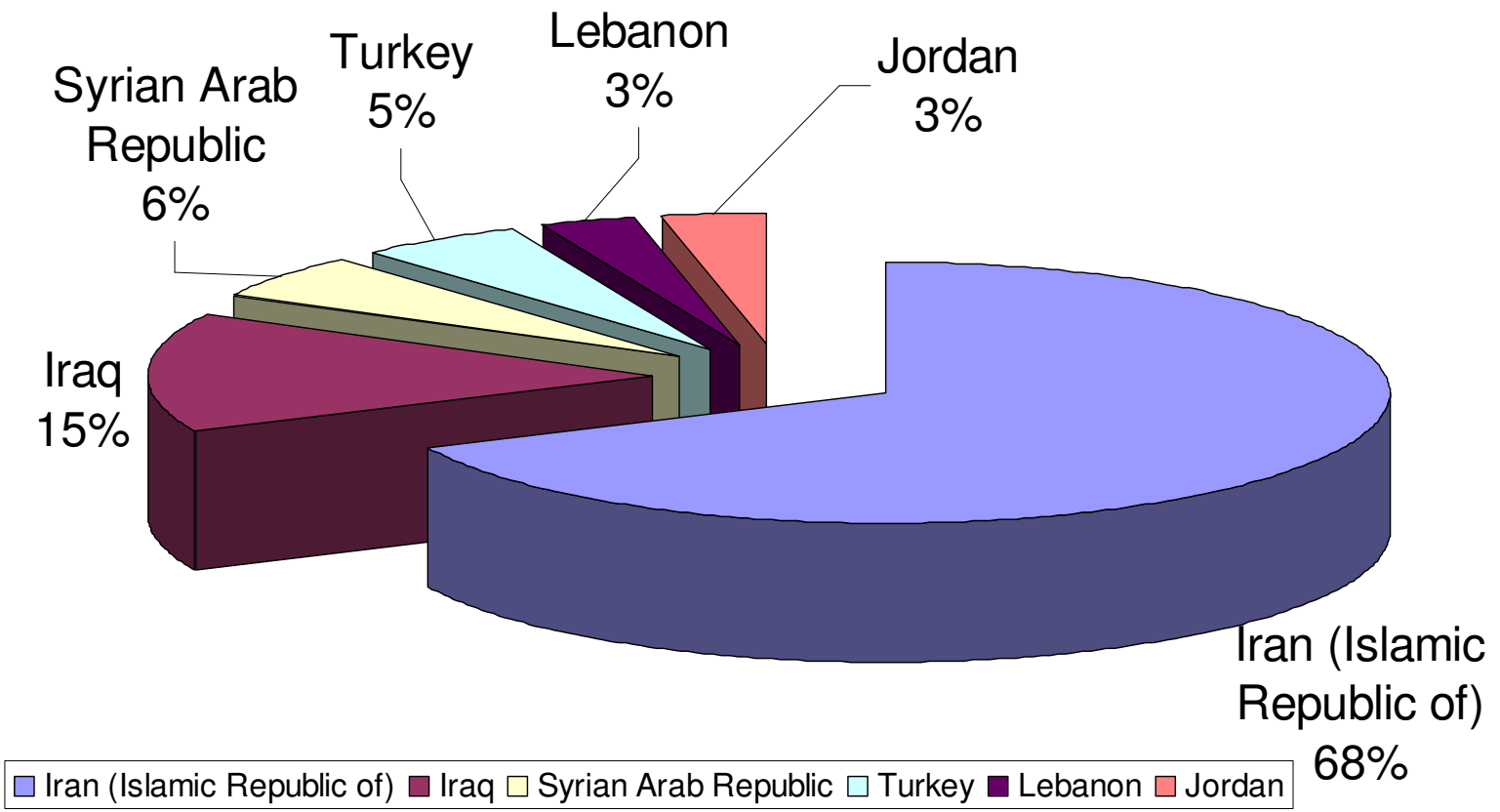
Members from Middle Eastern countries



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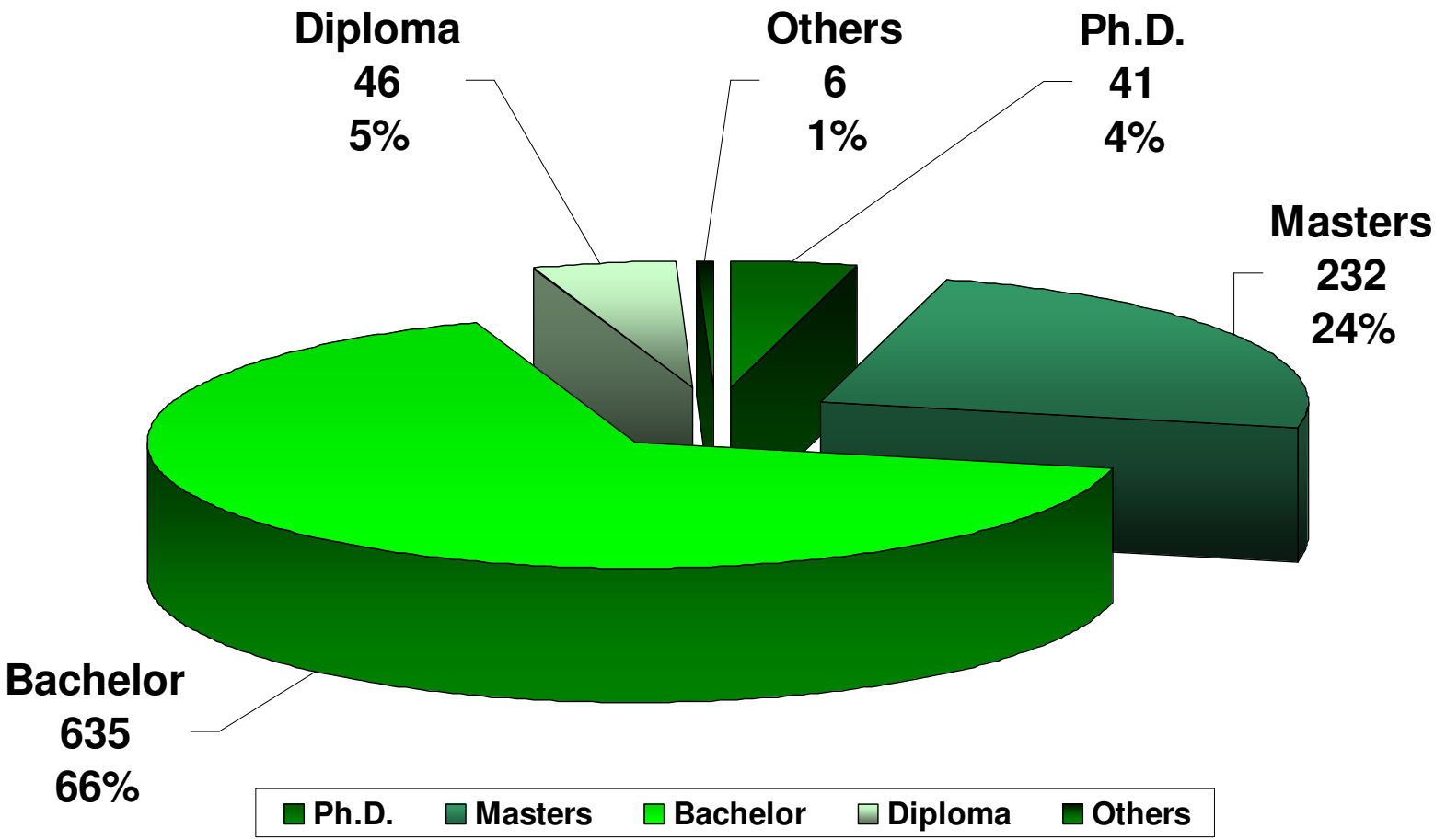
IEB Survey- Range of qualification



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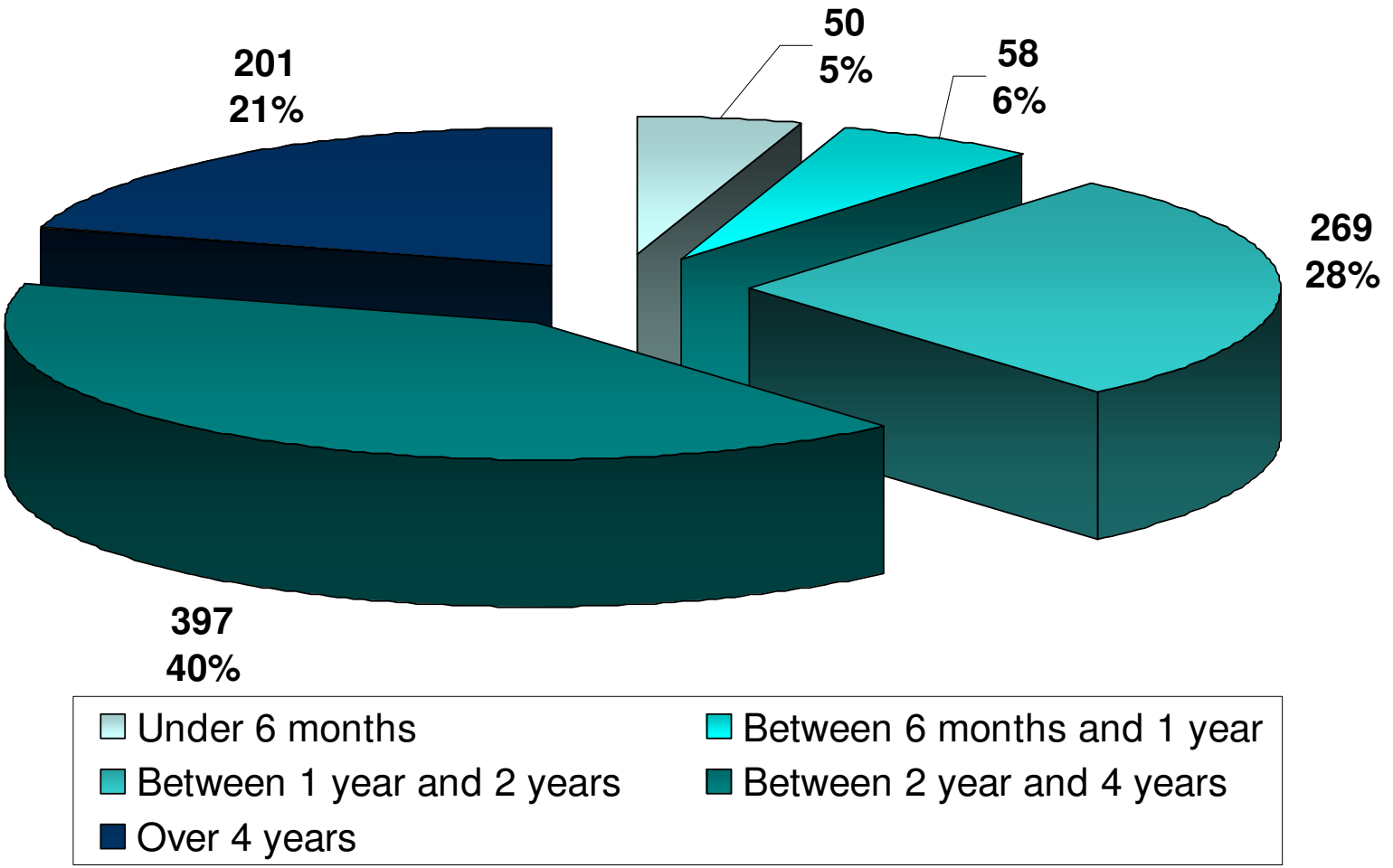
IEB Survey- Length of stay in Canada



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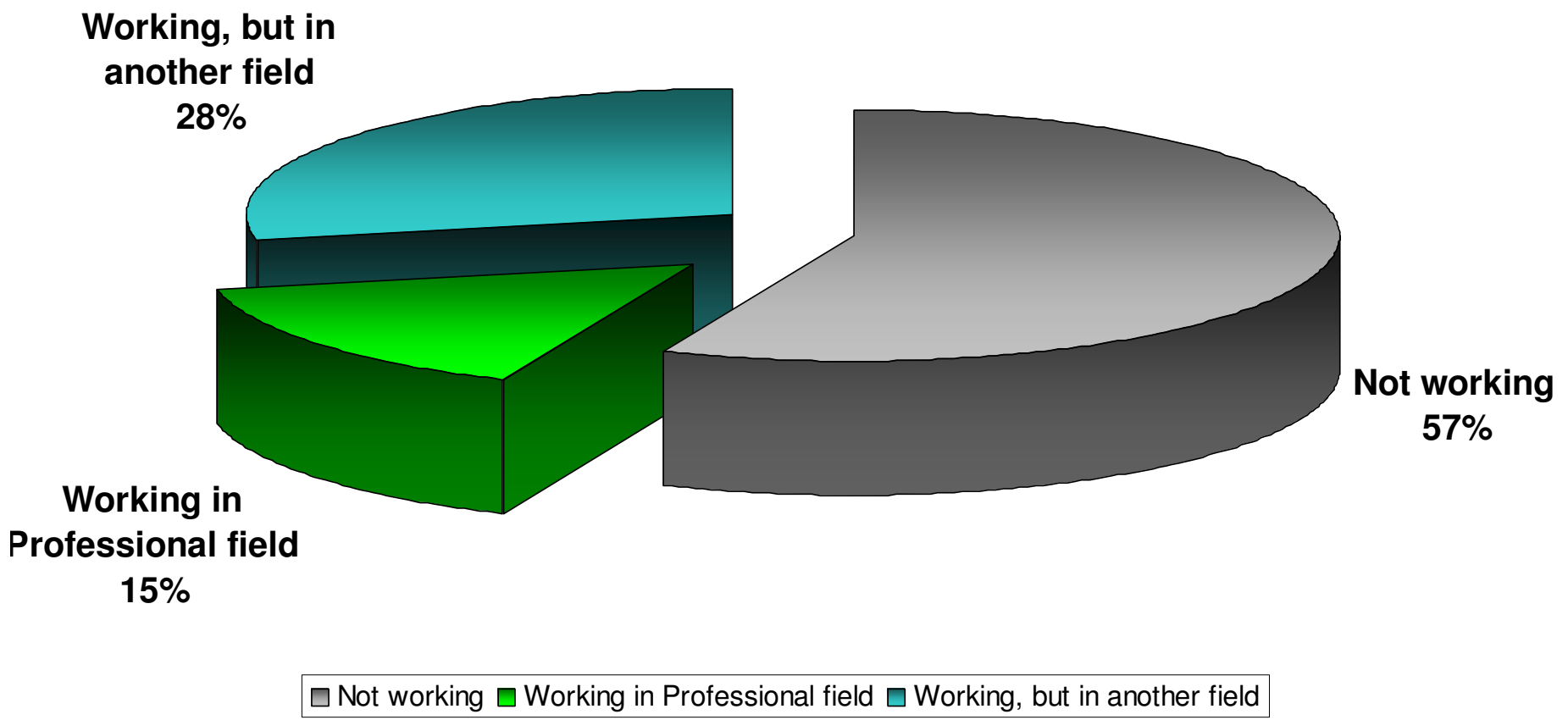
IEB Survey- Employment Status



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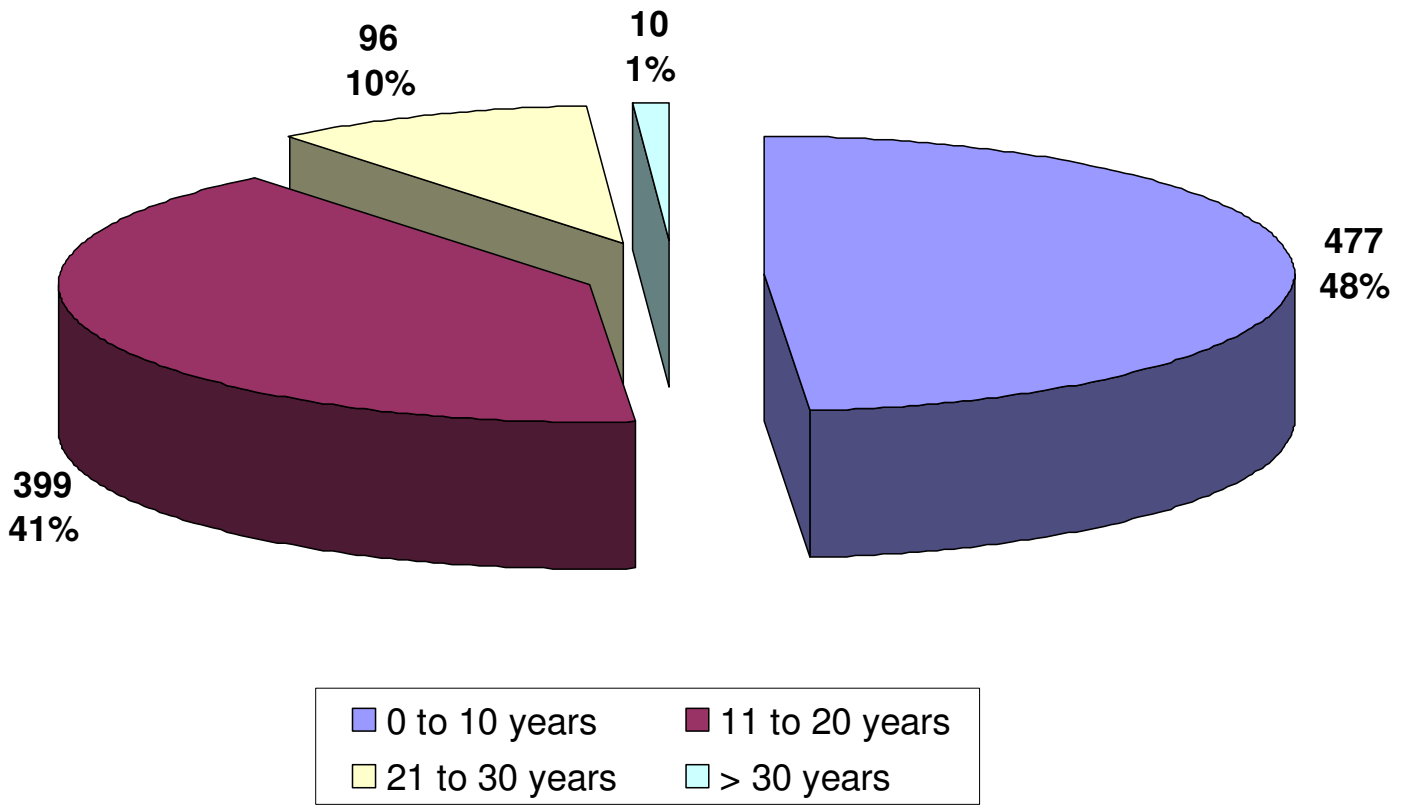
IEB survey- By years of engineering experience



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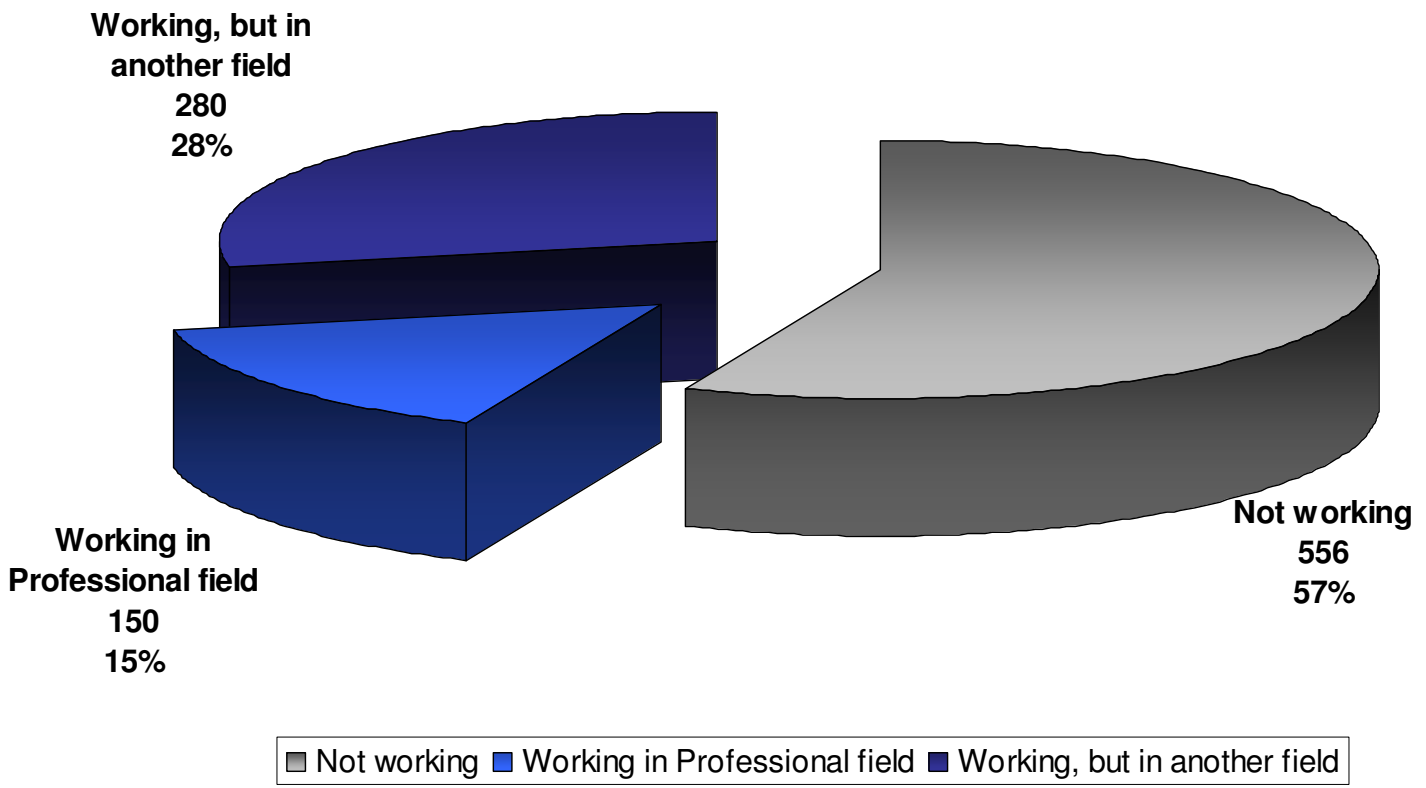
IEB Survey-Employment Status



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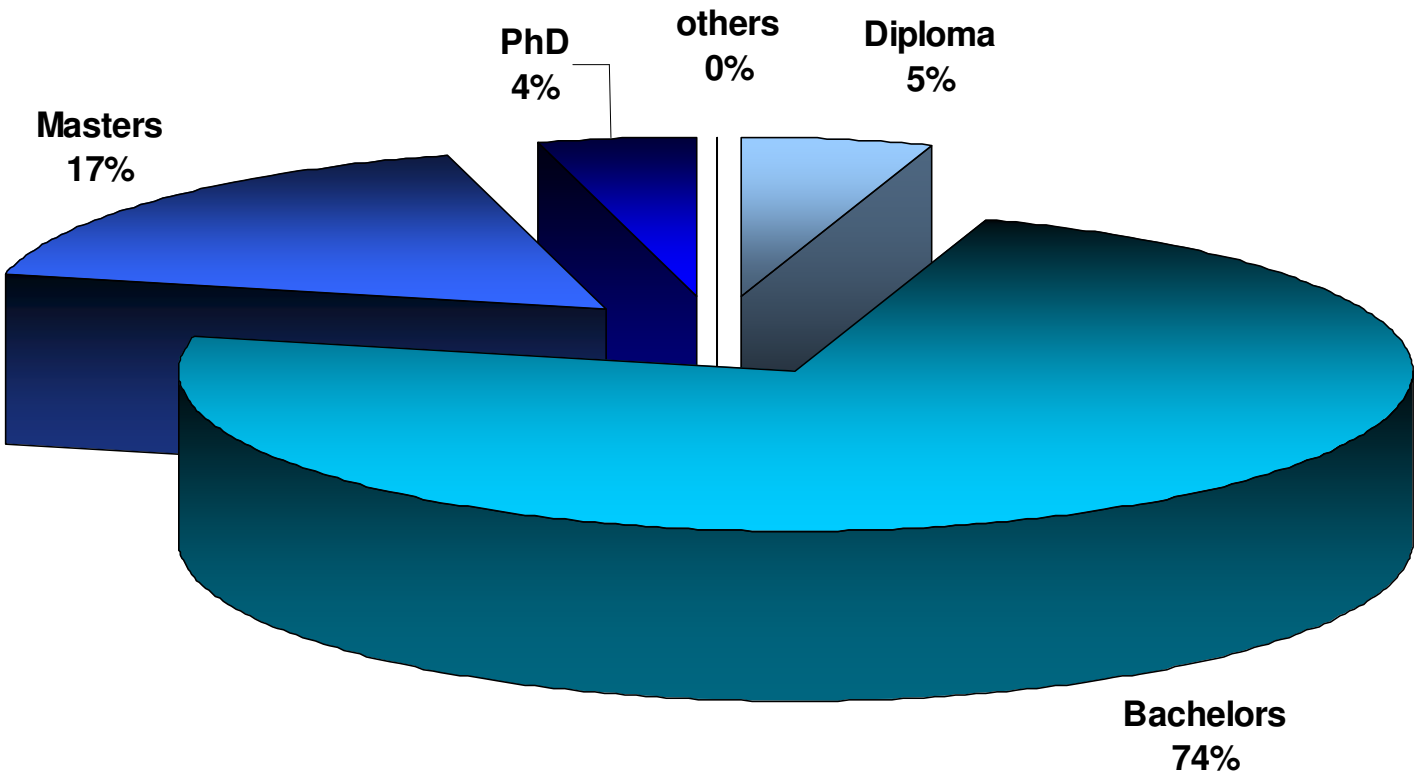
Employed IEB Survey-Range of qualifications



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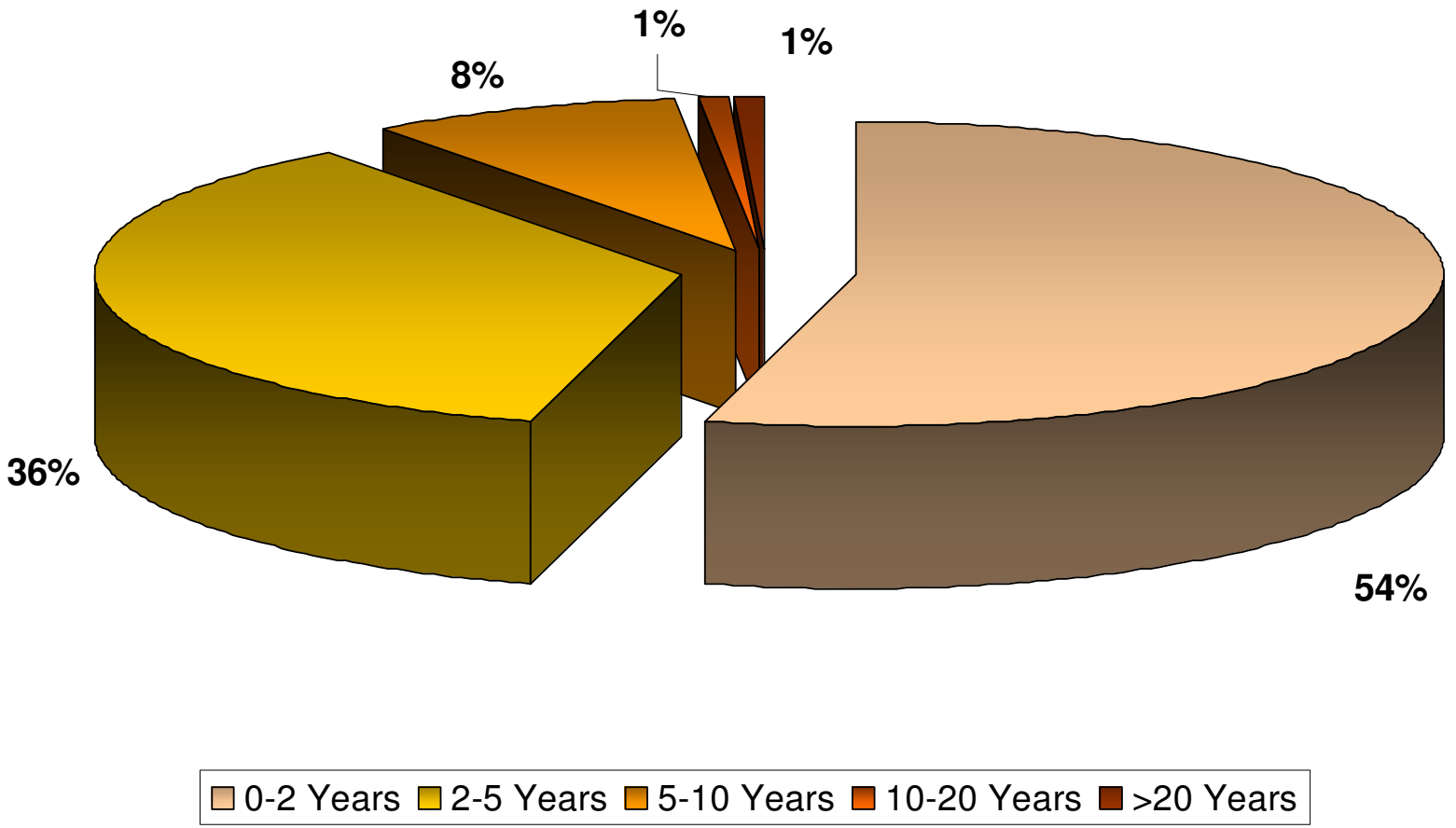
Employed IEB Survey-Length of stay



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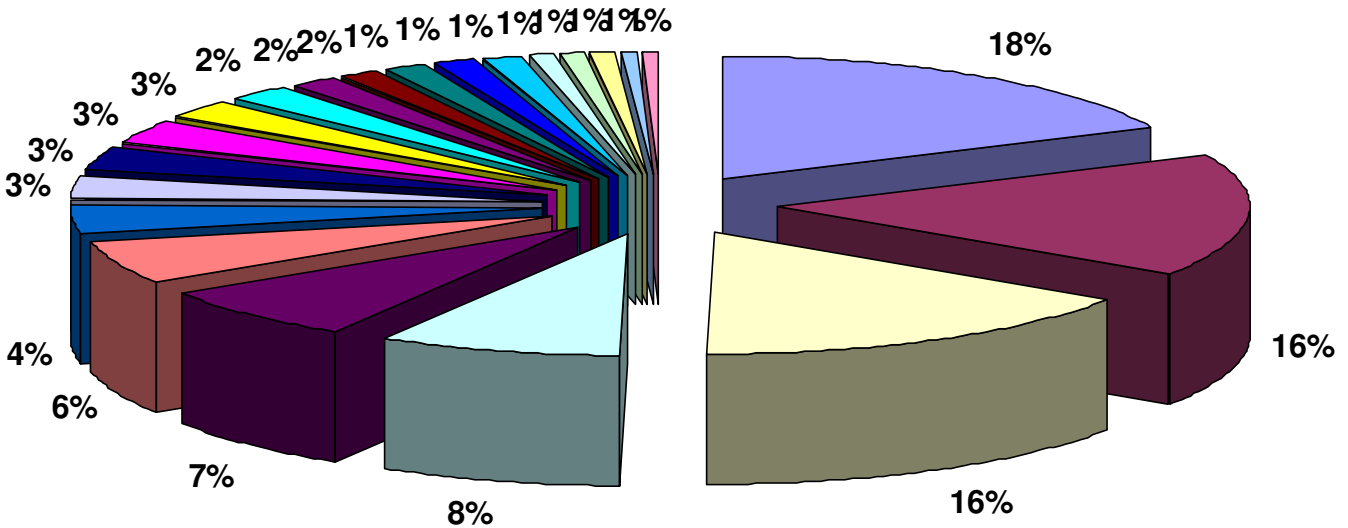
IEB Survey-Range of disciplines



- Civil Engineering
- Mechanical Engineering
- Industrial and Manufacturing Engineering
- Other Professional Engineering, n.e.c.
- Electrical and Electronics Engineering Technologists and Technicians
- Civil Engineering Technologists and Technicians
- Engineering Inspectors and Regulatory Officers
- Petroleum Engineering
- Mechanical Engineering Technologists and Technicians
- Engineering Officers, Water Transport
- Geological Engineering
- Electrical and Electronics Engineering
- Engineering Managers
- Chemical Engineering
- Software Engineering
- Computer Engineering (Except Software Engineering)
- Metallurgical and Materials Engineering
- Industrial Engineering and Manufacturing Technologists and Technicians
- Aerospace Engineering
- Mining Engineering
- Stationary Engineering and Auxiliary Equipment Operators
- Railway and Yard Locomotive Engineering

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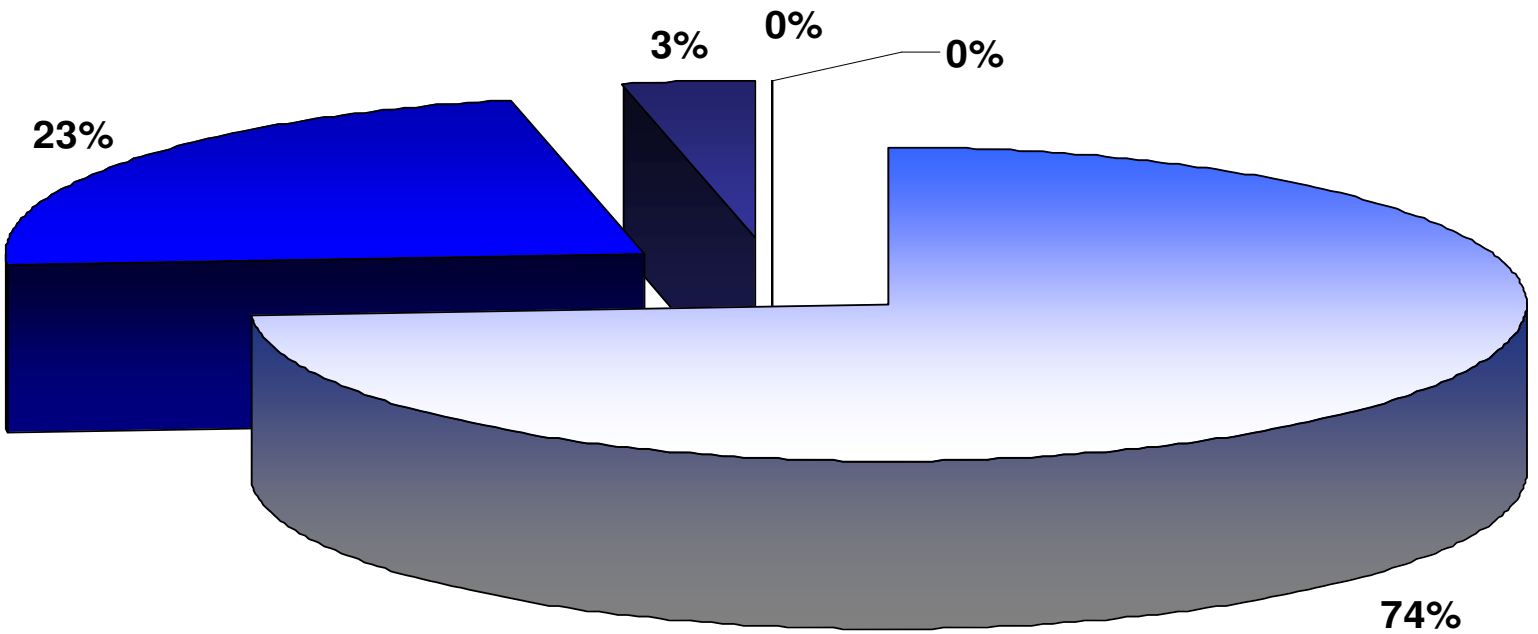
Employed IEB Survey-By years of engineering experience



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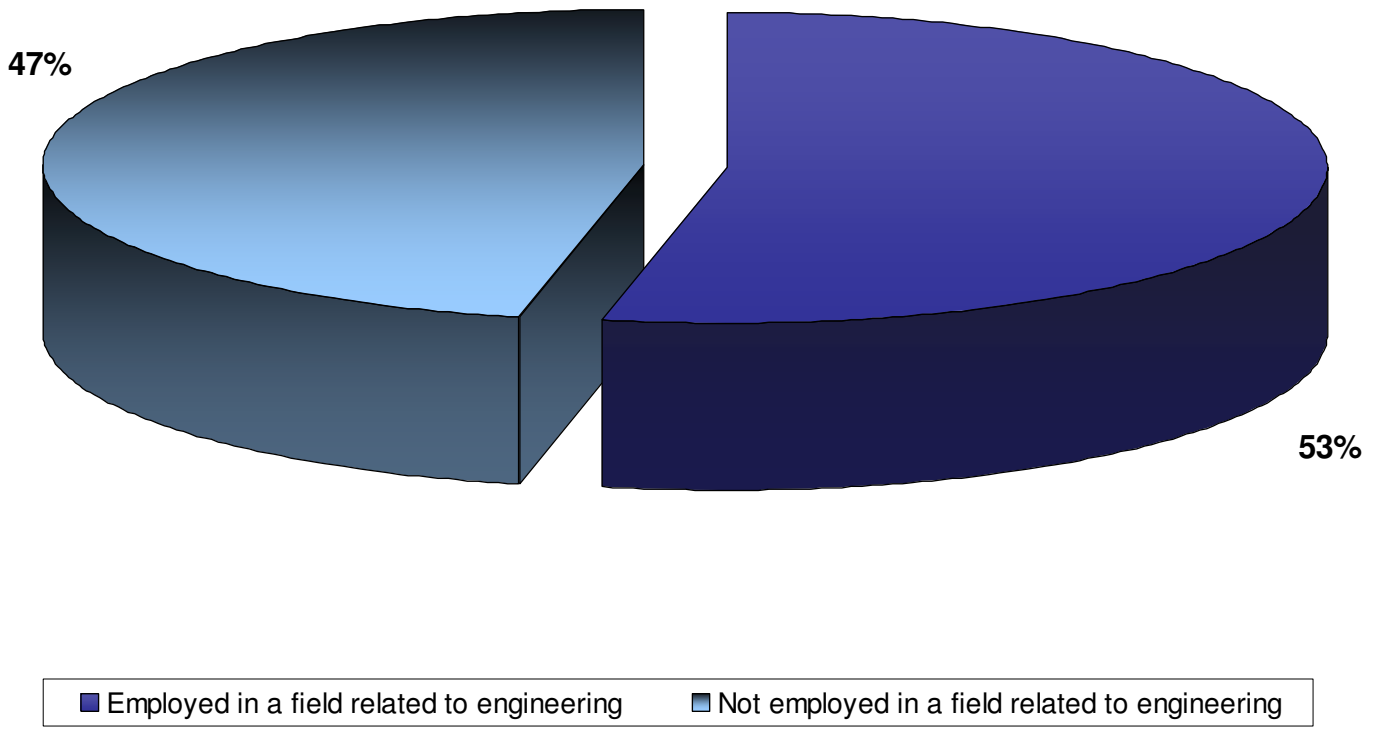
Employed IEB Survey- By Employment



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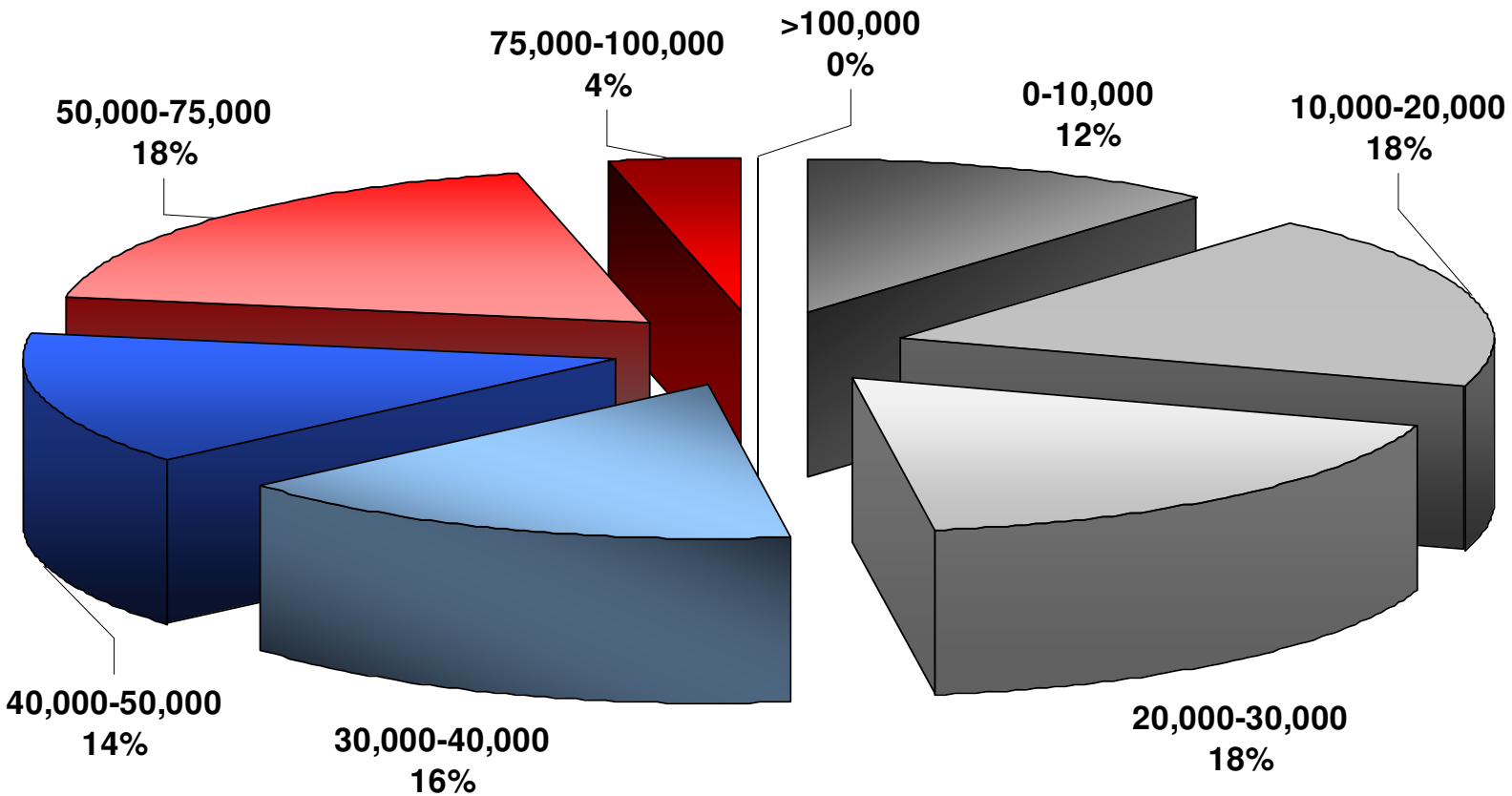
Employed IEB Survey- Salary



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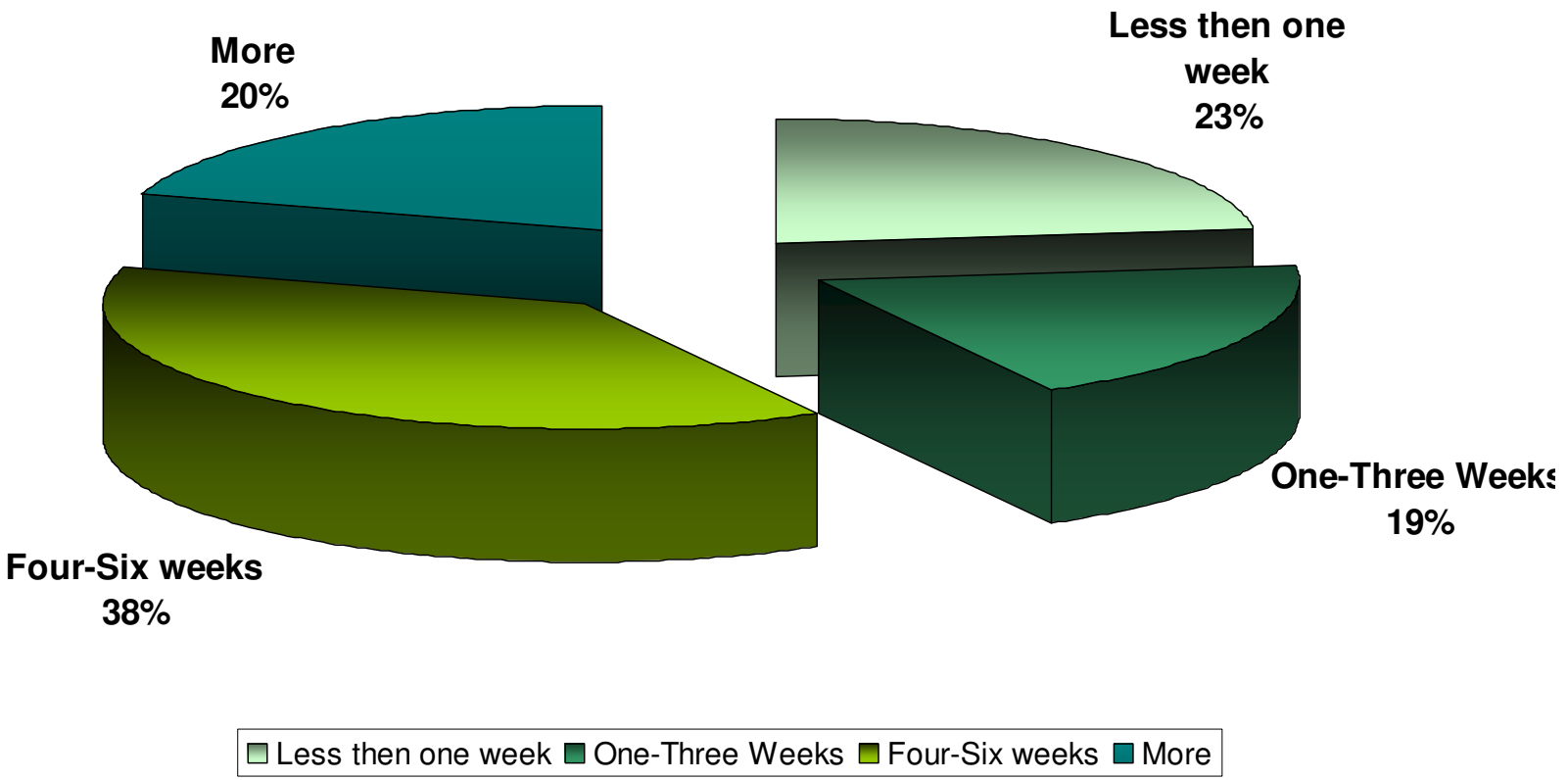
Employment Support Survey-
Length of program



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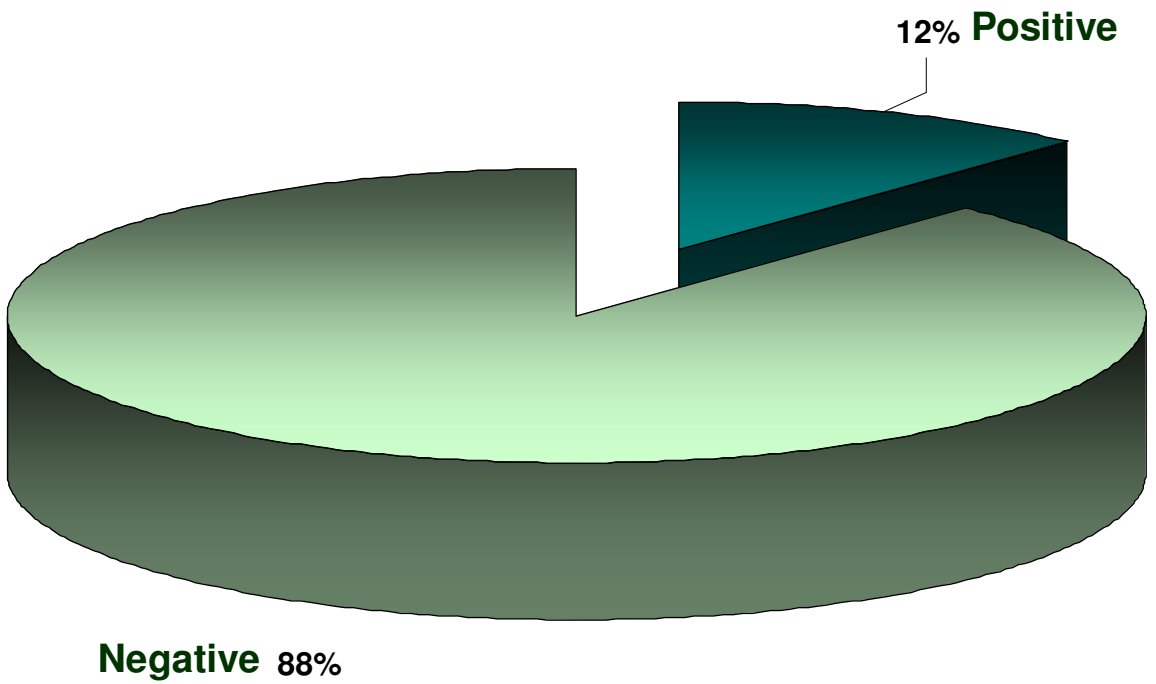
Employment Support Survey-
Outcome



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