

Canadian college and university pathways as seen through the eye of the 2013 National Graduate Survey: Results and methods

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Ruth Childs, Amanda Brijmohan & Jinli Yang
OISE – University of Toronto

CIRPA Annual Conference, Halifax
October 27, 2015

Objectives

- Understand student pathways through a new conceptual lens;
- Evaluate current pathway policies in light of recent data; and
- Develop an institutional research agenda using the National Graduate Survey.

Plan

Pathways – Methods – Results – Discussion

The Research Team



Gavin Moodie



Jinli Yang



Eric Lavigne

Ruth
Childs



Amanda Brijmohan



Leesa Wheelahan

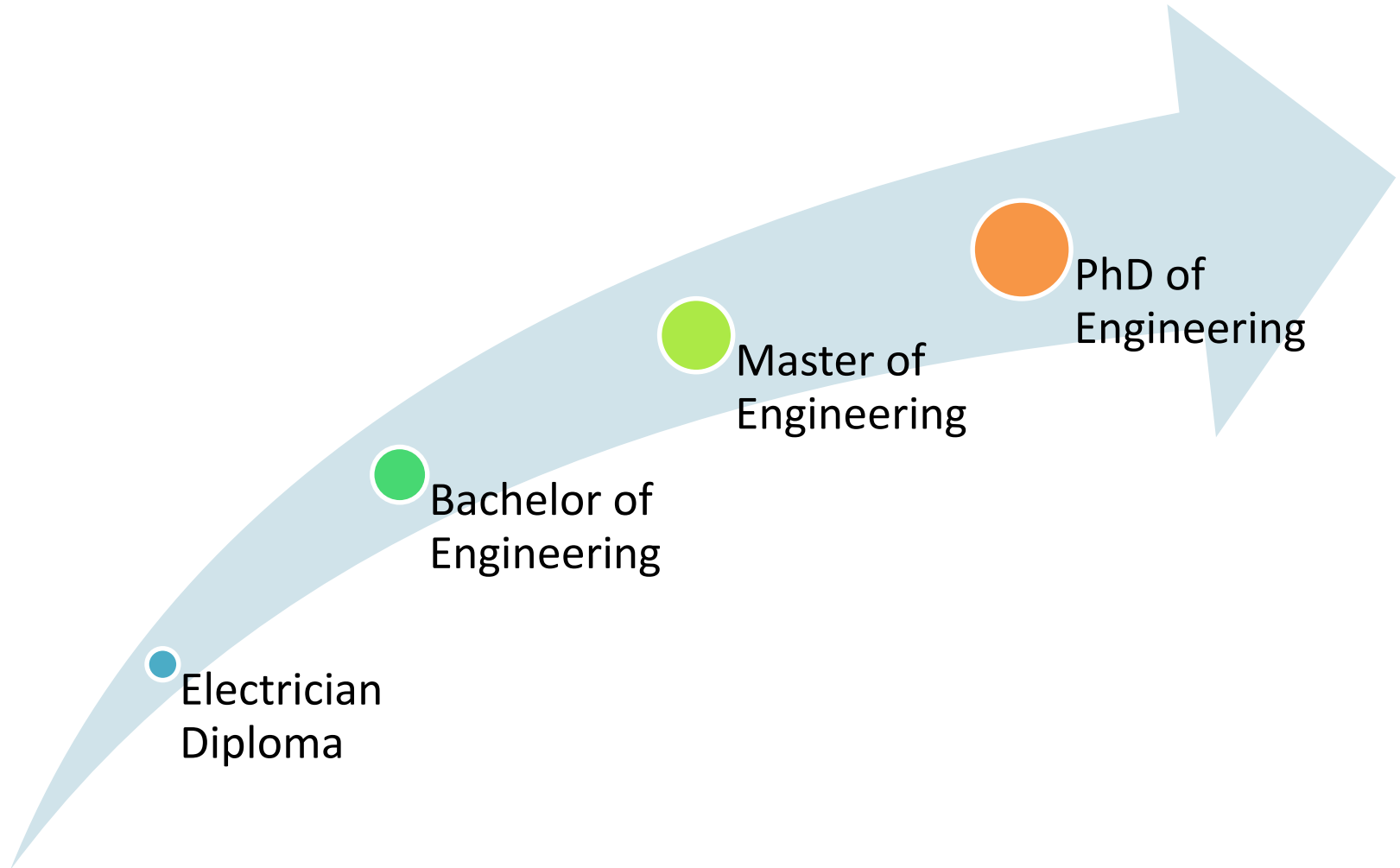
Pathways

The Purpose of Qualifications
Pathways as Designed or as Traveled

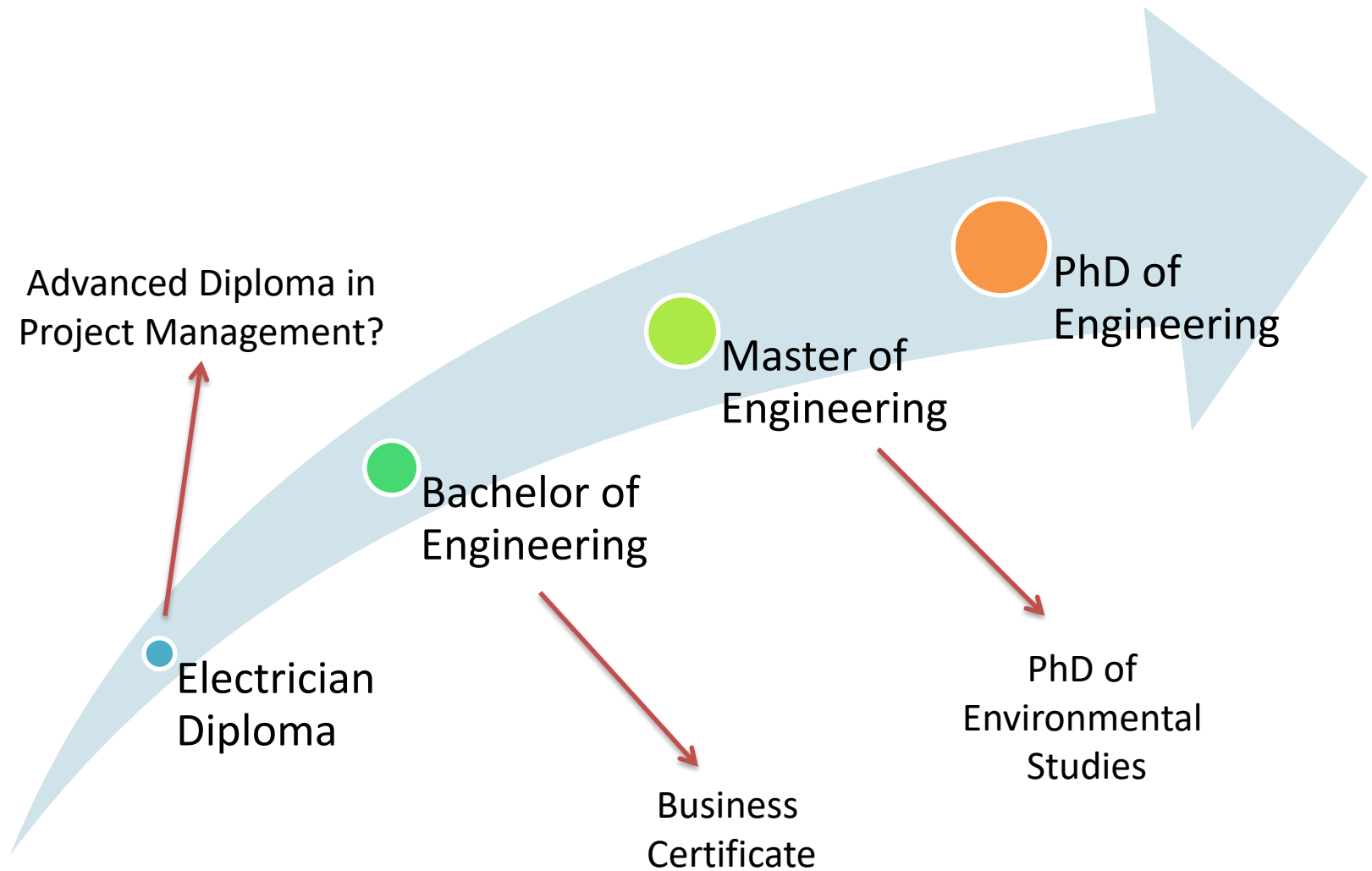
Associated Purposes of Qualifications



Expected Pathways

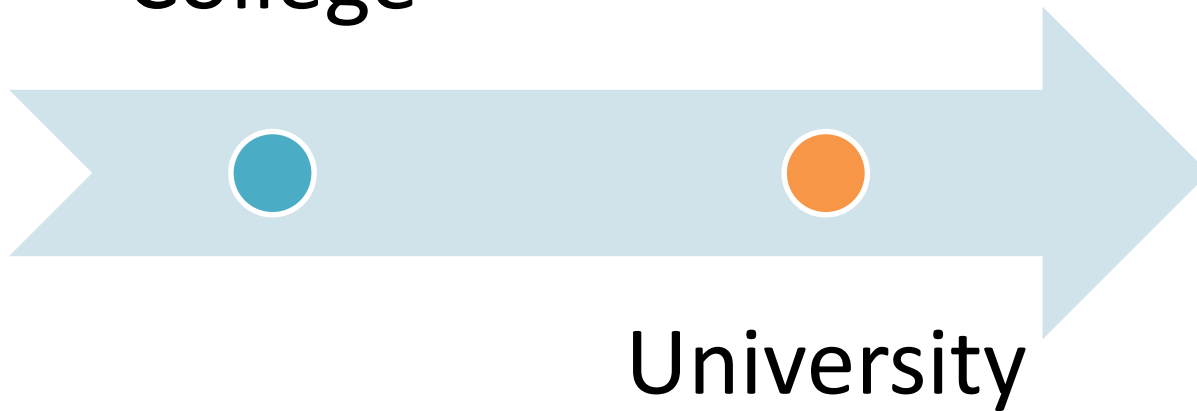


What Could Happen Instead...



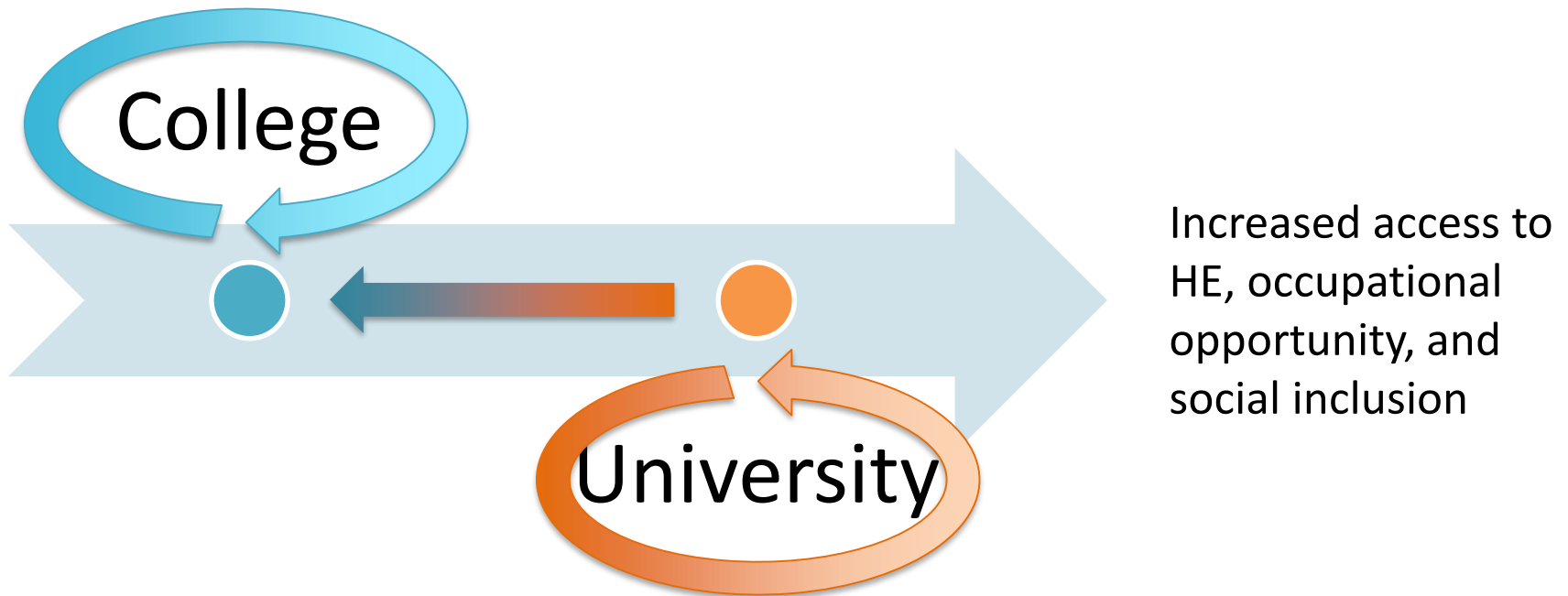
Expected Pathway Policy Focus

College



Increased access to
HE, occupational
opportunity, and
social inclusion

Needed Pathway Policy Focus



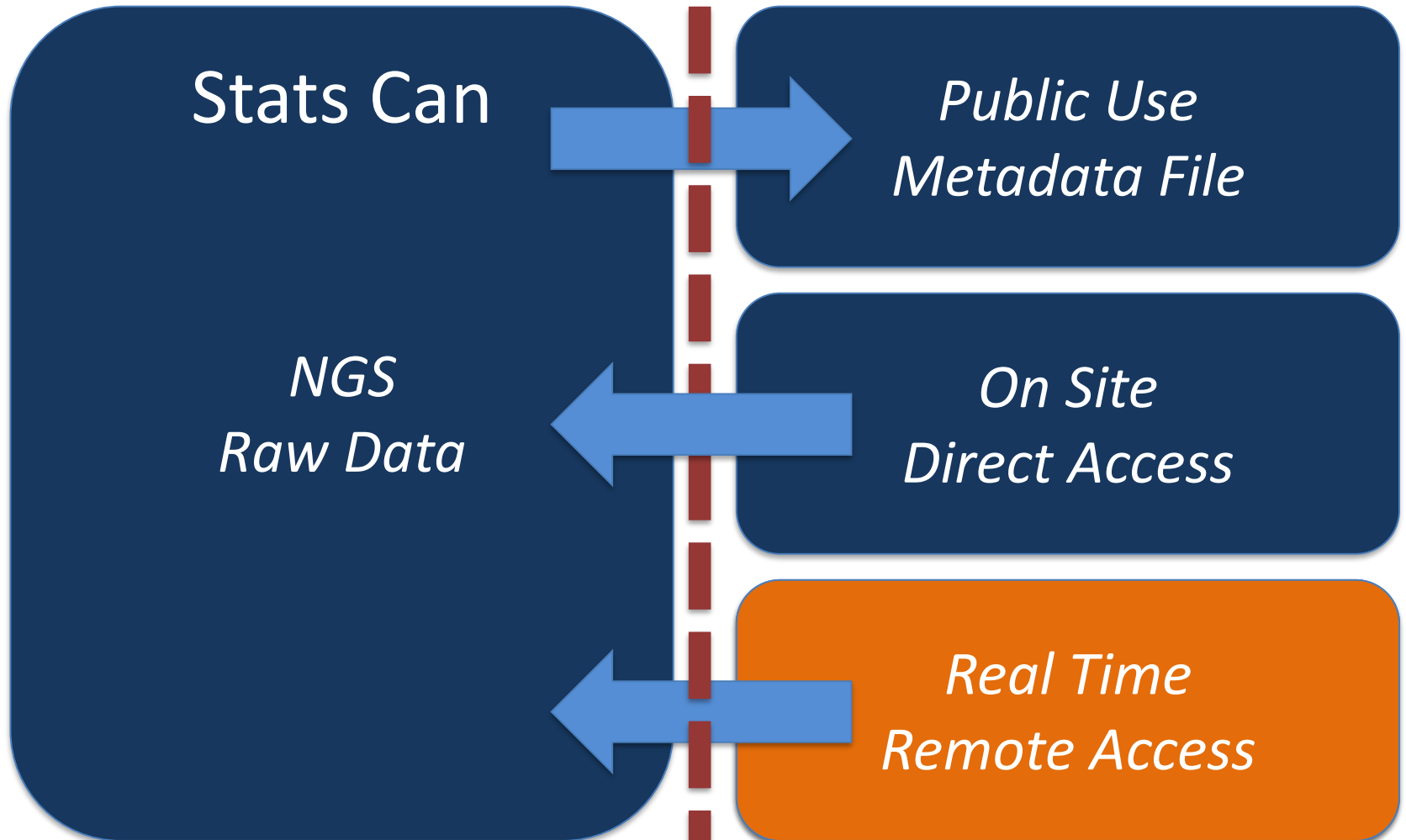
Methods

The NGS 2013
Data Collection
The RTRA
Transfer Period
Data Aggregation
Confidence Intervals

The NGS 2013

- Purpose of the Survey
Investigate the links between postsecondary education and labour market.
- Sample Size
Canada: 28,715 graduates drawn from 431,921 graduates.
Ontario: 4,659 graduates drawn from 158,720 graduates.
- Key Variables
Graduates' field and level of education.
Accreditation, qualification required, and relation with credentials.

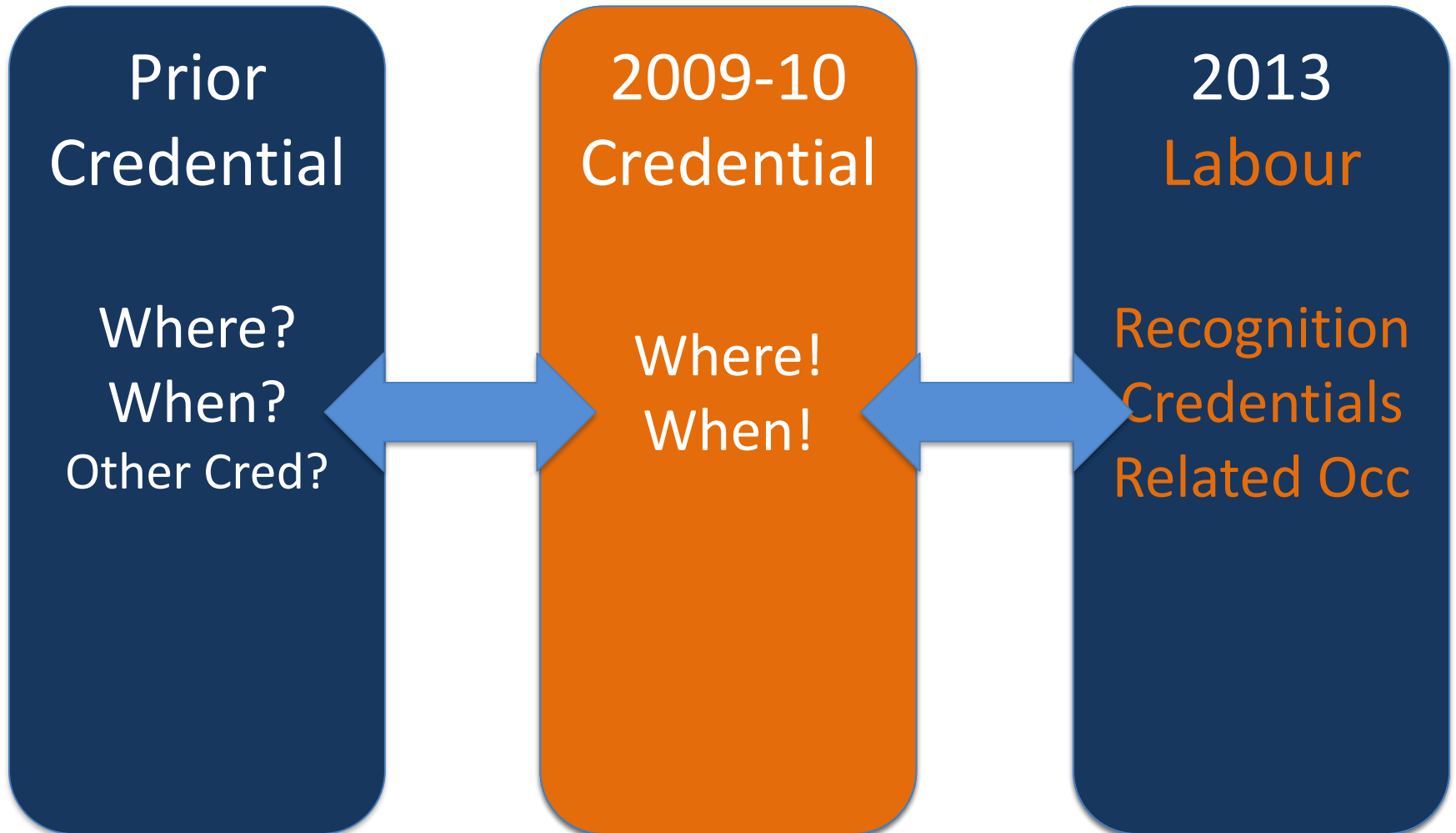
Data Collection



The RTRA

- Pros
 - Simpler approval process
 - Real time results
 - Remote access
 - SAS functionality
 - Excel outputs
- Cons
 - Higher costs
 - Data rounding
 - Limited to Stats Can SAS macros
 - Data dictionary incomplete
 - Key variables missing

Transfer Period



Data Aggregation

- Fields of Study
Broad fields for educational pathways
Subfields for occupational pathways
- Sectors of Study
College and University
- Advantages & Limitations
Confidence intervals
Broad strokes only
Master's and PhD's

Confidence Intervals

- **No standard errors'** calculations
Approximate Sampling Variability Tables for typical proportions.
- Rounding of numbers
RTRA rounds numbers at 20.

Broad strokes only
Pressure for aggregation

Results

Educational Pathways
Occupational Pathways

Overview of Ontario Sector Pathways, 2009-10 Graduates

Pathway	Number	% of transfer	% of same field
Total college grads (2009-10)	60,520		
Prior college grad to college grad (2009-10)	9,640	16	42
Prior university grad to college grad (2009-10)	7,020	12	21
2009-10 college grads with prior HE	16,660	28	33
Total university grads (2009-10)	98,200		
Prior college grad to university grad (2009-10)	9,160	9	37
Prior university grad to university grad (2009-10)	29,240	30*	33
2009-10 university grads with prior HE	38,400	39	40
Total 2009-10 HE grads	158,720		
Total 2009-10 HE grads with prior HE	55,060	35	38

* About two thirds going from bachelor's to master's; or, master's to PhD

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Prior university grad to university grad (2009-10)	29,240	30*	33 C: 42 %
2009-10 university grads with prior HE	38,400	39	40
Total 2009-10 HE grads	158,720		
Total 2009-10 HE grads with prior HE	55,060	35 C: 41 %	38

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University-to-College Pathway

University grad to college grad

2009-10 Canadian college graduates who had a
prior Canadian university qualification, by field of education

2009-10 grads field of education	% with prior qual	% with prior qual in same field	Alternative prior field	% with prior qual in alternative field
Ag	18	14	Soc sci	43
Eng	10	11	Physical sci	31
Bus	13	12	Soc sci	48
Ed	37	0	Hum	47
Health	10	18	Physical sci	66
Hum	9	22	Soc sci	44
Info sci	11	0	Soc sci	40
Other	0	0	n/a	n/a
Pers serv	5	0	Hum	53
Physical sci	0	0	n/a	n/a
Soc sci	20	54	Hum	27
Arts	7	42	Hum	25
Total	12	21		

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Ag	7	100	n/a	n/a
Eng	5	61	Pers serv/Phys Sci	17
Bus	14	70	Pers serv	12
Ed	4	0	Eng	56
Health	10	52	Pers serv	23
Hum	16	6	Soc sci	47
Info sci	6	22	Eng	44
Other	0	0	n/a	n/a
Pers serv	25	75	Hum	25
Physical sci	4	0	Hum	48
Soc sci	8	20	Hum	26
Arts	14	79	Soc sci	8
Total	9	37		

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Total	9 C: 21 %	37		

Labour Outcomes

Occupational Categories

Stream	Regulated?	Orientation	Subfields
1. Regulated	Yes	Occupational	Nurse registered Engineering practitioner
2. Focused	No	Occupational	Business Technician
3. Broad	No	General	Humanities Physical & life sciences

Research Focus

- Qualification Recognition
% of grads who could have taken steps to gain a formal recognition & of those, the % who chose to obtain one
- Qualification Level and Job Finding
To get job, level of education was:
Less than required = -1; Same as required = 1;
More than required = 2.
- Work and Qualification Match
How closely is the (main) job you held last week related to your qualification? Not related at all = 1;
Somewhat related = 2; Closely related = 3.

Labour Outcomes Results

Stream	Subfield	Qualification &		
		Recognition	Job Finding	Work
1. Regulated	Nurse registered	83 / 99	0.9	3.0
	Engineering practitioner	74 / 35	1.2	2.5
2. Focused	Business	52 / 22	1.6	2.3
	Technician	56 / 27	1.8	2.4
3. Broad	Humanities	19 / 61	1.6	1.9
	Physical and life sciences	13 / 22	1.5	1.9

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Discussion

Key Findings & Implications

Key Findings

Educational Pathways

- Broad field variations.
- Same field pathways generally weak.
- Ontario's CtoU well below Canada's.
- Reverse, forward, and horizontal transfer.
- Skill-deepening and -broadening transfers.
- Strong sending and strong receiving broad fields.

Pathways as designed
vs pathways as used

Key Findings

Occupational Pathways

- Screen and signal: regulations influence labour outcomes.
- Over qualification associated with non-regulated occupations.
- Low link between work and broadly-structured fields of study.

More regulated occupations?
More precise programs?

Conclusion

Using the NGS
Educational and Occupational Pathways
Purposes of Qualifications
Future Work

Thank you!
eric.lavigne@mail.utoronto.ca