Pathways in Technology

A collaboration between Secondary School and Industry

Developing 'New Collar' jobs for the future

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Pathways in Technology (P-TECH)

- IBM's P-TECH model "reinvents high school"
- Three way partnership between industry, high school and further education (TAFE/University)
- P-TECH started in Brooklyn, NY, in 2011
- New York City Department of Education, City University of New York and New York City College of Technology

"Something we're looking to duplicate all across the country"

Barack Obama, U.S. President, 2015

President Barack Obama and Education Secretary Arne Duncan talk with students while visiting a classroom at the Pathways in Technology Early College High School (P-TECH) in Brooklyn, NY, Oct. 25, 2013. (Official White House Photo by Pete Souza)
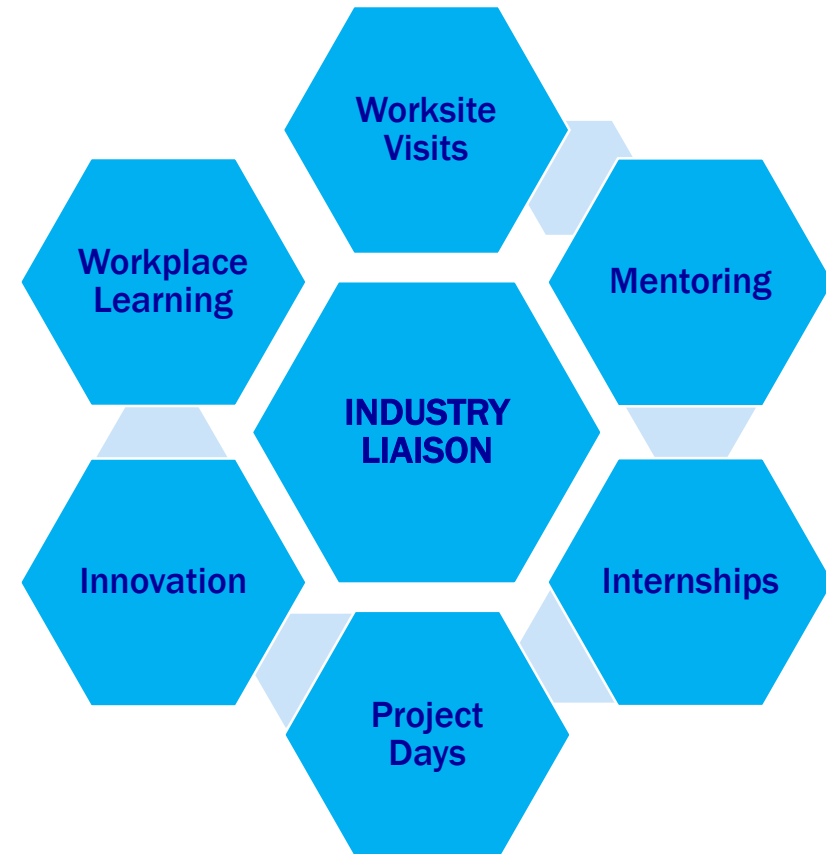
P-TECH Ethos - Collaboration

- A **partnership** between **education**, **industry** and **community**

- A partnership with a clear purpose:

"To provide an industry supported pathway

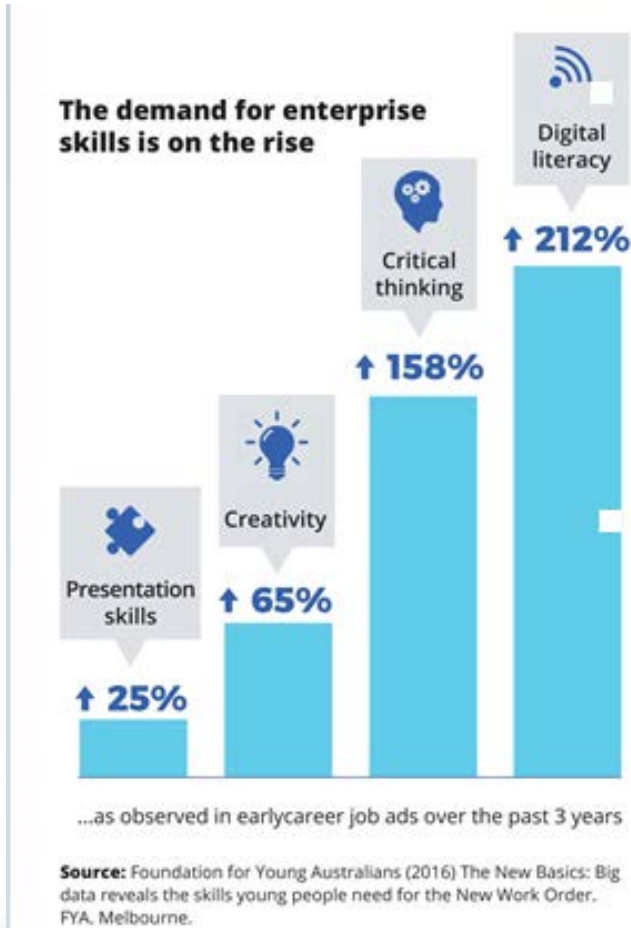for young people to achieve a senior secondary and industry qualifications

that strengthens their employment prospects."

Industry and Education partnership

- Skills mapping
- Workplace learning curriculum
- Mentors for all students
- Workplace experiences: Speakers, Worksite Visits, Job Shadowing, & Structured Work Placements
- Skills based paid internships
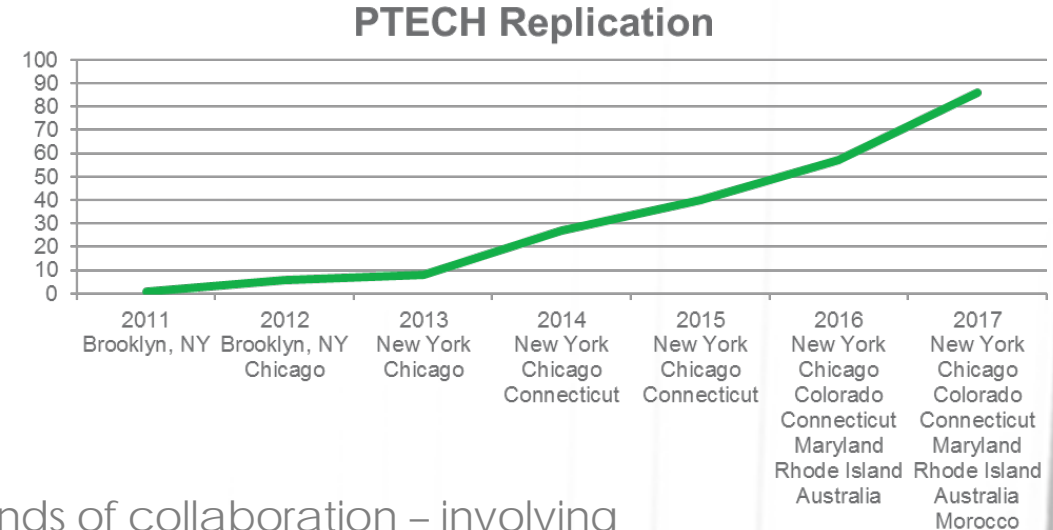- First in line consideration for jobs

Worksite Visits

Workplace Learning

Mentoring

INDUSTRY LIAISON

Innovation

Internships

Project Days

Employers are demanding higher skills

The demand for enterprise skills is on the rise

Digital literacy
↑ **212%**

Critical thinking
↑ **158%**

Creativity
↑ **65%**

Presentation skills
↑ **25%**

...as observed in earlycareer job ads over the past 3 years

Source: Foundation for Young Australians (2016) The New Basics: Big data reveals the skills young people need for the New Work Order. FYA. Melbourne.

P-TECH in the US and elsewhere

- There are now 86 schools globally

- US, Australia, Morocco, and South Africa with more planned

PTECH Replication

2011	2012	2013	2014	2015	2016	2017
Brooklyn, NY	Brooklyn, NY	New York	New York	New York	New York	New York
	Chicago	Chicago	Chicago	Chicago	Chicago	Chicago
			Connecticut	Connecticut	Colorado	Colorado
					Connecticut	Connecticut
					Maryland	Maryland
					Rhode Island	Rhode Island
					Australia	Australia
						Morocco

"To create new collar jobs we will need new kinds of collaboration – involving federal and state governments, public school systems, community colleges and private business, across multiple industries. Together, we must work to reform education, policy and strategic approaches – in the U.S. and around the world – for today's job opportunities that will build a future of growth and prosperity."

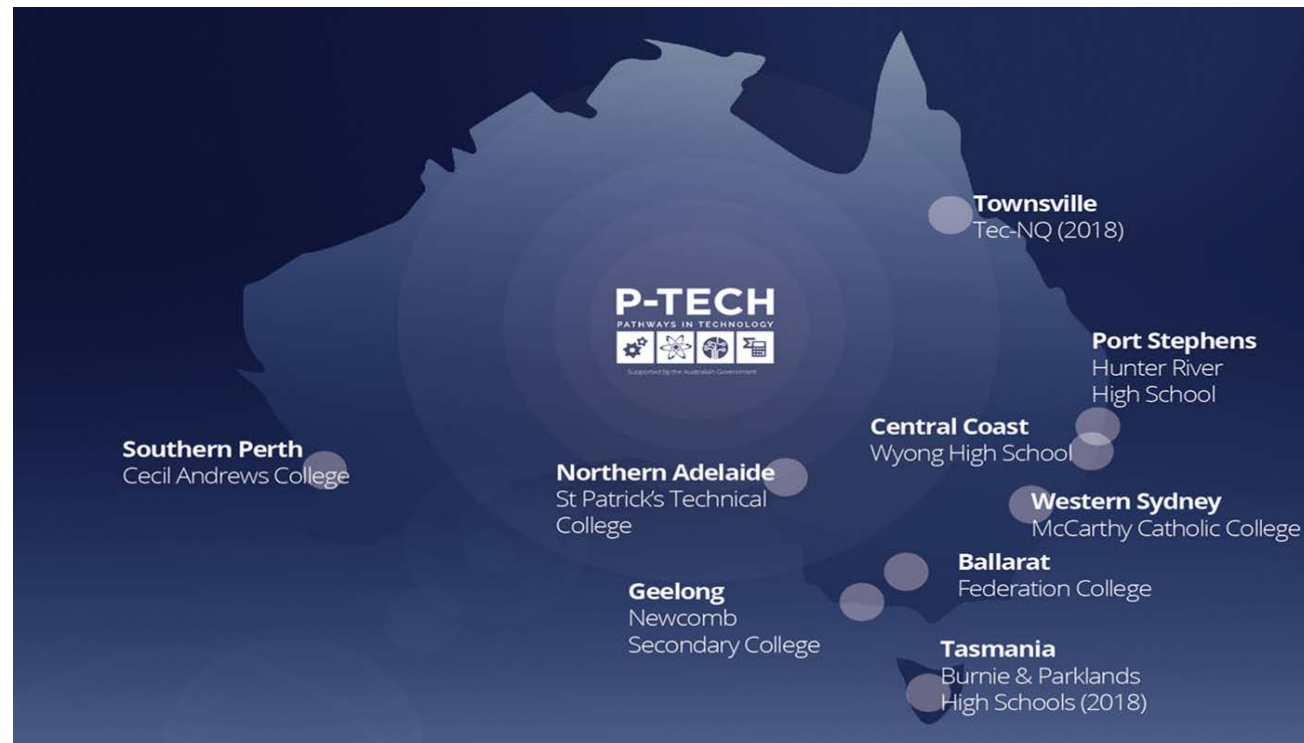Ginni Rometty, IBM CEO, 2016

P-TECH in the Australian context

- "The Government is working closely with IBM and the Skilling Australia Foundation to implement a P-TECH pilot that is suitable for the Australian context," Senator Birmingham said.

- "The P-TECH styled pilot represents an excellent opportunity to further strengthen connections between education and industry to support young people to make a successful transition from school to work."

- "STEM subjects are critical to occupations where we have skills shortages, but we must also keep in mind that these current shortages provide countless young Australians the opportunity to build a great career," Senator Birmingham said.

P-TECH in Australia

- 8 P-TECH schools now in operation in VIC, NSW, QLD, SA and WA
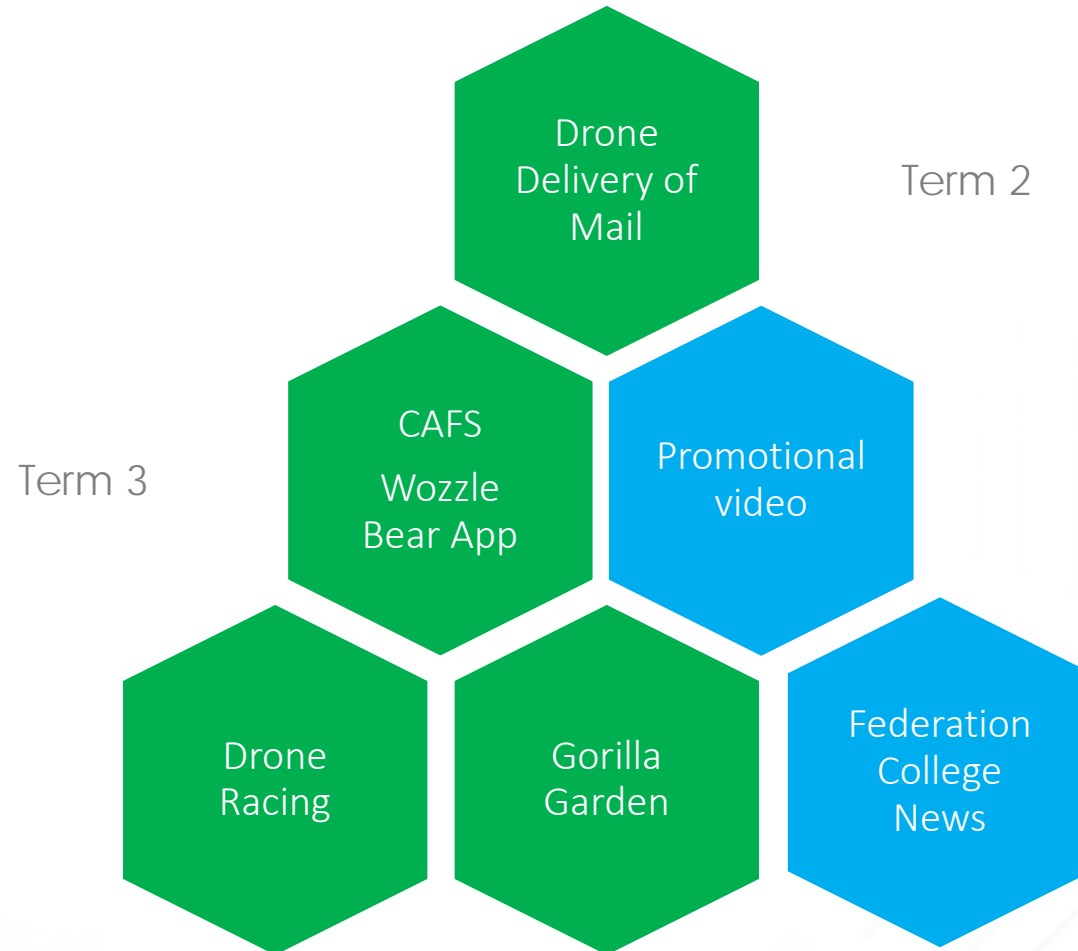
- 6 more planned in 2018
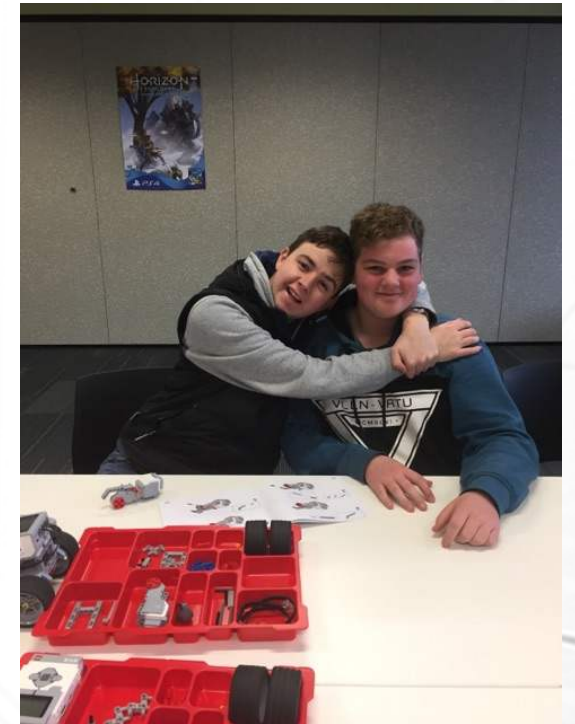
P-TECH @ Federation College

- In 2017 - 47 P-TECH students across Years 10, 11 & 12.

- P-TECH program is themed Victorian Certificate of Applied Learning (VCAL) Senior Secondary program.

- Learning outcomes are in line with the Victorian Curriculum and Assessment Authority curriculum guidelines.

- Outstanding success of the partnership between Federation College and IBM has been recognised by the state government
  - 2017 Victorian Curriculum and Assessment Authority (VCAA) Partnerships' Award;
  - 2017 The Educator Innovative School Award (Top 40 in Australia)

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P-TECH projects in 2017

Drone Delivery of Mail

CAFS Wozzle Bear App

Promotional video

Drone Racing

Gorilla Garden

Federation College News

Term 2

Term 3

P-TECH projects in 2017

Future learning spaces

- Mimics the work space of the future

- Flexible, Adaptable, Inclusive

- Learning work space

- Provides a shared space for work and education to integrate

- Promotes interaction, teamwork and collaboration

- Playful space that fosters creativity

IBM SpaceMakers - Germany

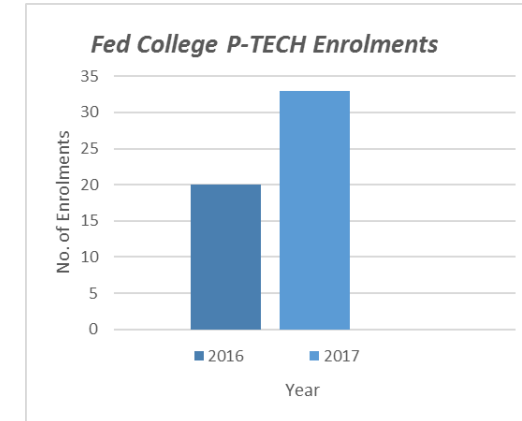Learning Commons Library of Tec de Monterrey, Mexico City

IBM SpaceMakers - Spain

IBM SpaceMakers - France

Measures of Success

- Student retention rates

- Student learning growth

- Student, Staff and Industry relationships

- Student feedback
  - "The drone project: I felt proud because after all our work paid off, the people at IBM were very proud of us and seemed interested and pleased."
  - "I really enjoyed the second visit to IBM with the phone interview and the panel questions. I feel that I really got a lot out of that and I was proud when I got some really positive feedback from IBM."
  - "I dreaded running out of time on the drone project, mostly because we had a fairly strict time limit. It would be easier to have more time to do projects like these."
  - "I dreaded the phone interview at IBM, but instead of running away I just faced the challenge head on and tried my hardest."
  - "Curiosity - I asked plenty of thought-provoking questions, especially during our visits to IBM, and they were pleased with the questions I asked."
  - "Pretty interesting semester. I'm happy with how I have improved over this term and I'm excited to continue."

Fed College P-TECH Enrolments

Want to learn more about P-TECH?

- https://federation.edu.au/ptech

- http://www.thecourier.com.au/story/4759625/drone-drop-off-success-for-p-tech/

- http://www.thecourier.com.au/story/4107400/p-tech-students-tour-fecri/

- http://www.thecourier.com.au/story/4273822/futures-stem-from-p-tech/

- http://www.thecourier.com.au/story/3689650/new-teaching-course-to-engage-students/

- http://saf.org.au/p-tech-australia/

Questions?