OCAS

What Does Tomorrow Look Like?

HOW OCAS DEALS WITH THE PACE OF TECHNOLOGICAL CHANGE

What is Technology?

JEFF ELABORATES ON SOME TECHNOLOGY HIGHLIGHTS FROM HIS 20 YEARS IN HIGH-TECH

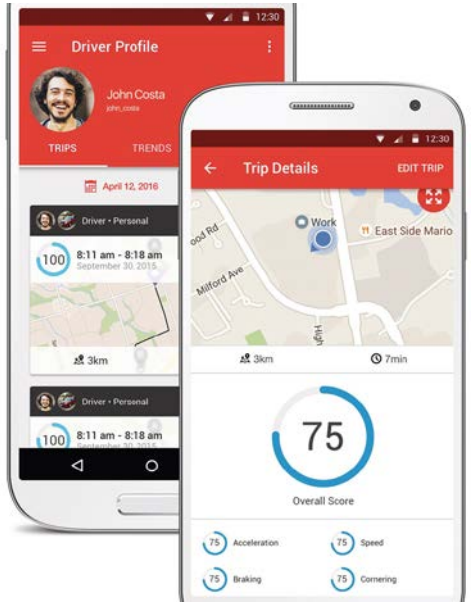
This is Technology…

John F. Mitchell w. DynaTAC c1973

As is This…

Motorola Razr c2004

And This…



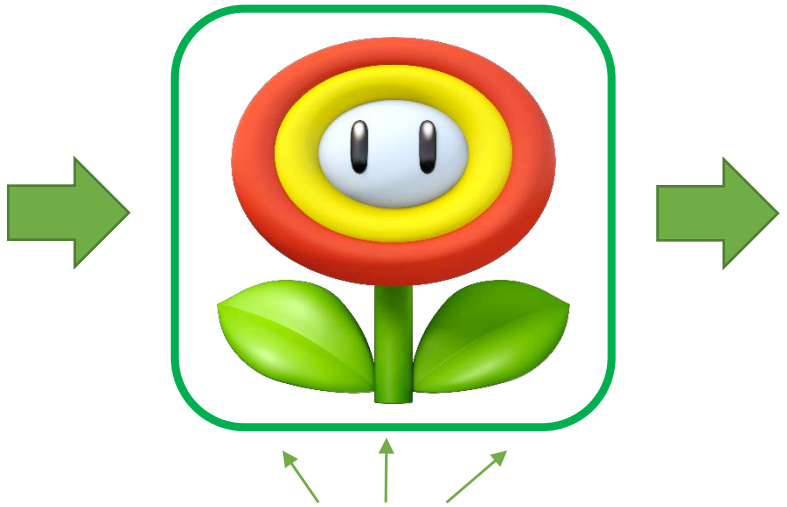
IMS DriveSync c2017

What If "WHAT" Isn't The Right Question?

MAYBE WE SHOULD BE ASKING.. WHY IS TECHNOLOGY IMPORTANT?

Technology Transforms Capabilities…

From This…



To THIS!

So Maybe… THIS is a Better Way To Think About Technology

Technology Transforms

AND INDUSTRIES ARE SURPRISED BY IT…

Technology Transforms … Being on Time

From This…

The first watches emerged in 16th century Europe, evolved from portable spring-driven clocks.

Seiko Quartz c1969

To THIS!

With quartz first launched in 1969, Seiko had become the world's largest watch company by 1977 in terms of revenues.

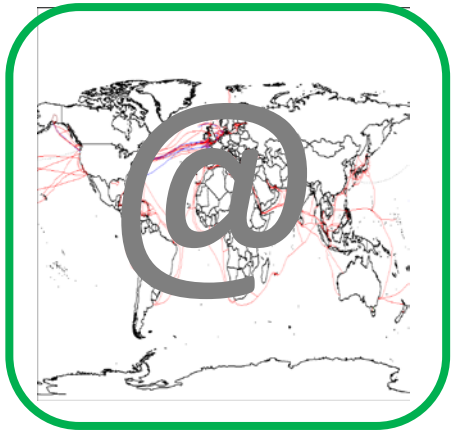
Technology Transforms

AND INDUSTRIES ARE SURPRISED BY IT…

Technology Transforms … Checking Facts

From This…

The modern encyclopedia was developed from the dictionary in the 18th century. As of 2008, Britanica named 4,411 contributors



Internet Adoption c2001

To THIS!

On 1 November 2015, Wikipedia announced it had reached 5,000,000 English articles

Technology Transforms

AND INDUSTRIES ARE SURPRISED BY IT…

Technology Transforms … Travel & Sleep

From This…

In 93 years Hilton amassed
610,000 rooms in 88 countries

airbnb

Belong Anywhere

airbnb

c2008

To THIS!

In 4 years airbnb amassed
650,000 rooms in 192 countries

and Technology is Transforming Now

AND INDUSTRIES ARE SURPRISED BY IT…

Technology is Transforming … Staying Healthy

From This…

As a Healthcare user yourself, how do you feel about this?

Dr. Sonny Kohil – Vitaliti

Personal Telematics c2017

To THIS!

Stories like CloudDX are only starting to be written now

How Will Technology Transform Education?

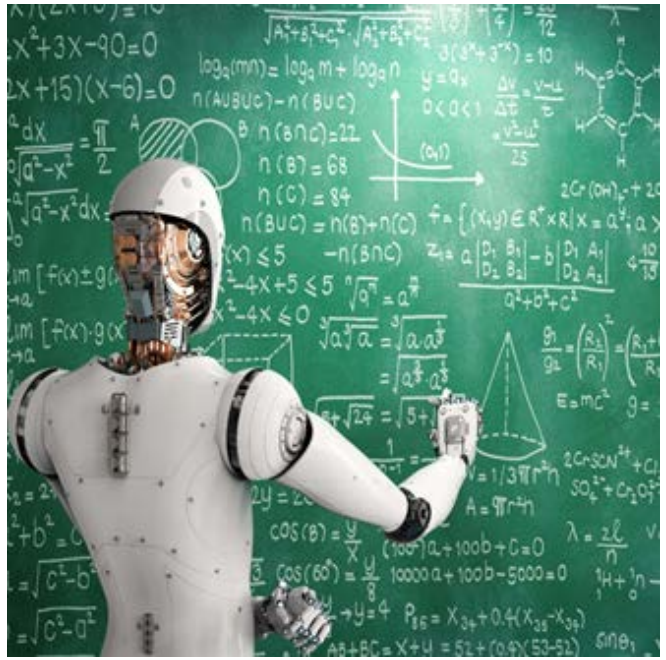
THE COMMONLY MISUNDERSTOOD PIVOT ON TECHNOLOGY

Is this scenario possible?

From This…

Artificial Intelligence c20xx

To THIS?



Future-Proofing

THE NEXT ERA OF HUMAN-MACHINE PARTNERSHIPS

The good news is that most experts say that its not possible by 2030

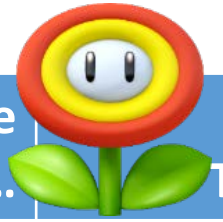
As processing power increases 10 times every five years (Source: Moore's Law), humans will be eclipsed by computers in many areas. Machines will bring lightning speed and accuracy to all manner of tasks. However, it would be a fallacy to assume that technology is making human effort redundant. ***It's doubtful that computers will have fully mastered the fundamental, instinctive skills of intuition, judgment, and emotional intelligence that humans value by 2030.*** *Over the next decade, partnering with machines will help humans transcend their limitations.*

The Next Era of Human-Machine Partnerships

- IFTF, DELL Technologies

Recap - Learning From History

AKA… IF ONLY THEY KNEW THEN WHAT WE KNOW NOW



The Need The User Had…	The Approach That The Business Locked On…	The Technology That Transformed…	The Opportunities That Emerged…
• To Be On Time	• Watches as the perfection of being the **“Gear-Meshing-Expert”**	• Quartz Technology	⊕ Cheaper Watches ⊕ More People On Time ⊖ Clock Making Industry?
• To Check Facts	• Encyclopedias as the perfection of **“Heavy-Book-Distribution”**	• Internet Adoption	⊕ Easy Access to Information ⊕ Knowledge/Access is a Right ⊖ Information Quality?
• To Travel & Sleep	• Hotels as the perfection of being the **“Concrete-Building-Creator”**	• Shared Room Booking	⊕ Everyone is a Hotel Manager ⊕ More Variety in Travel ⊖ Room Quality? Services?
• To Be Healthy	• Healthcare as the perfection of **“Sick-People-Queueing”**	• Personal Telematics	⊕ Greater Access to Health ⊕ New Telematics Markets ⊖ Personal Privacy?

The Call To Action

WHO WILL DEFINE HOW TECHNOLOGY TRANSFORMS EDUCATION?

How will **WE** use technology to transform education?

From This…

Using Tech Like…

To THIS!

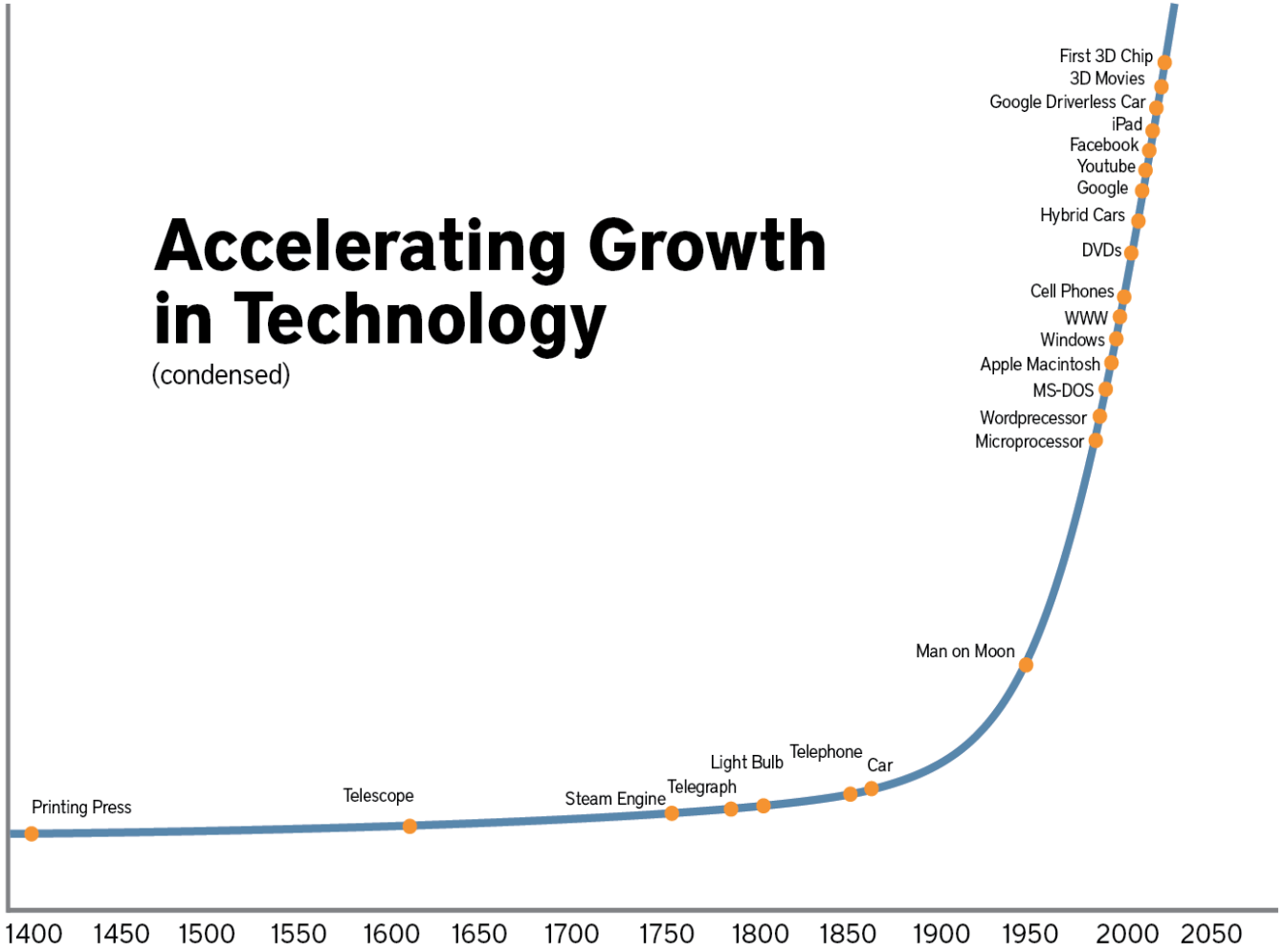
or whatever… **Your Users Need**

What About This Moore's Law Thing?

WHY DO I FEEL OVERWHELMED BY CHANGE?

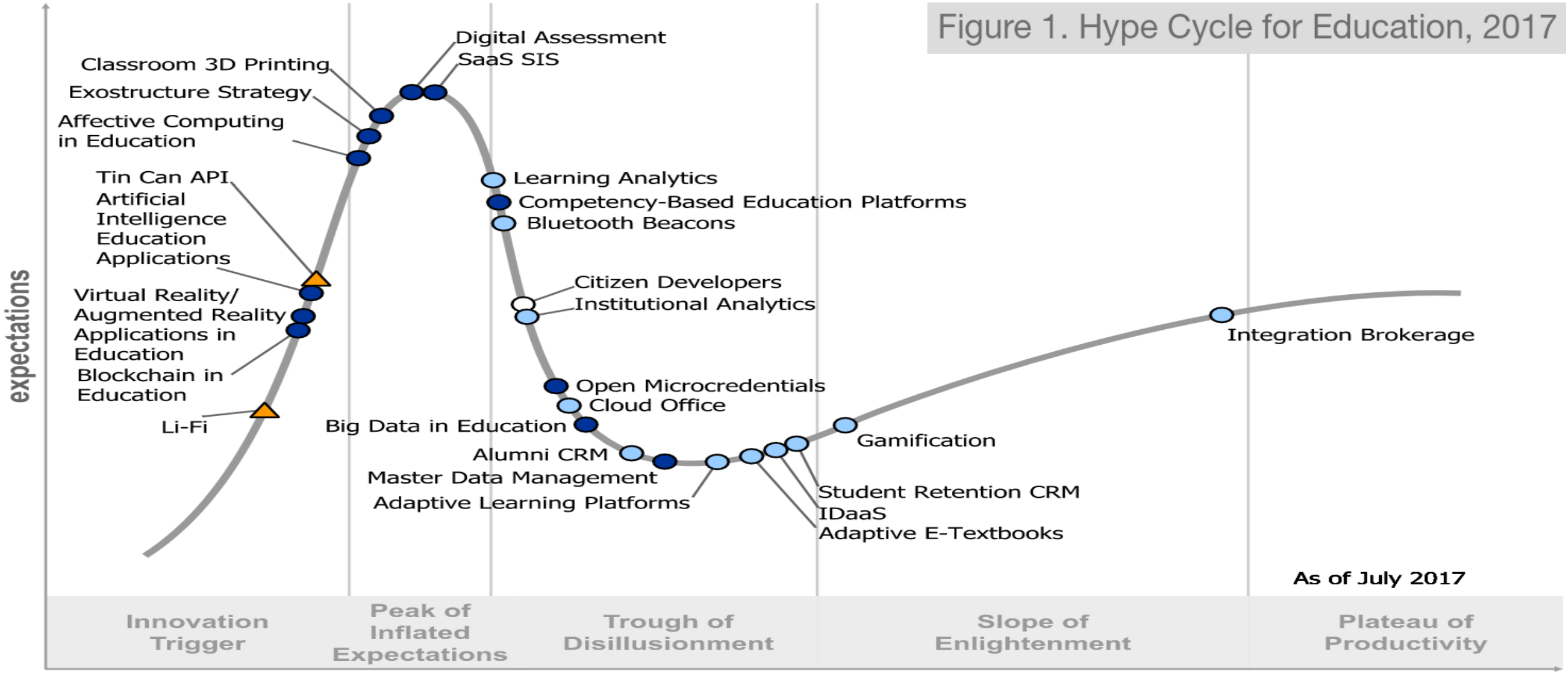
Moore's law is the observation, originally made in 1965, that the number of transistors in a dense integrated circuit doubles approximately every two years.

What items are on this curve affect EdTech?



Separating Reality from Hype

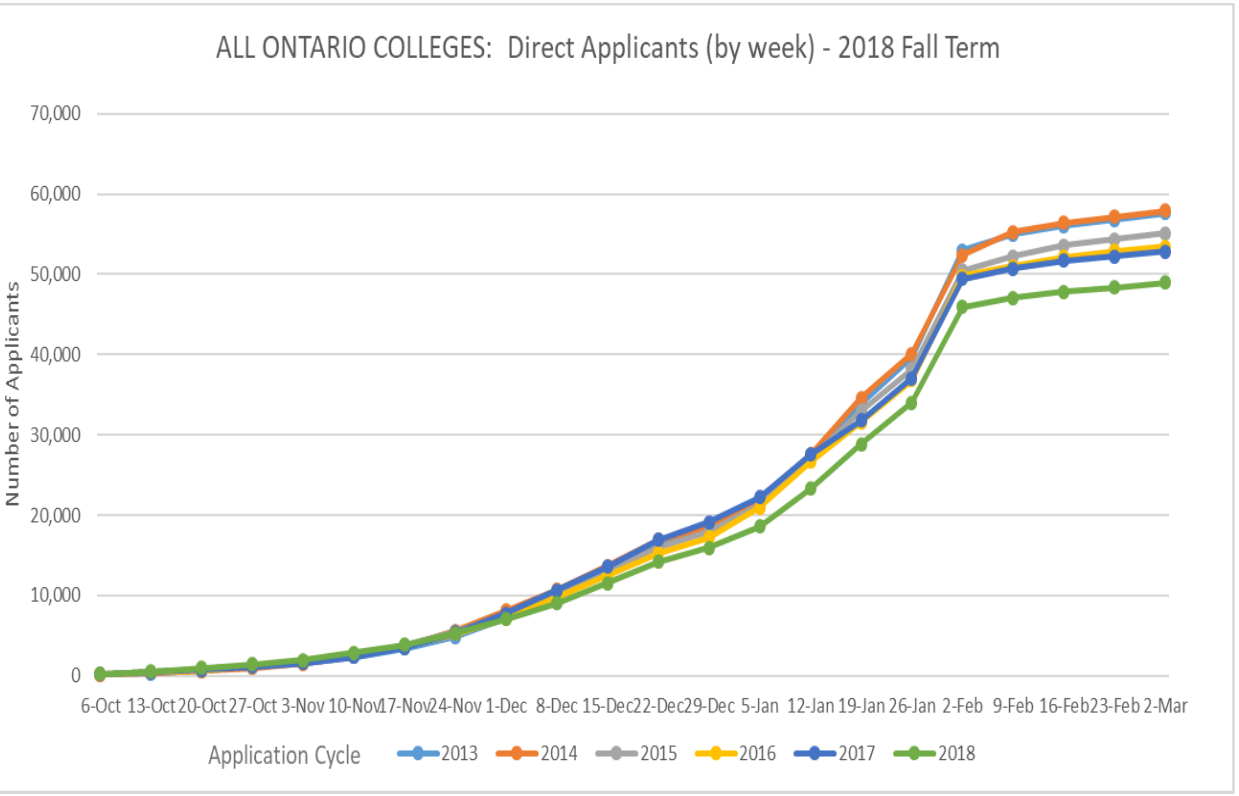
CROSS-REFERENCING REPORTS LIKE THE GARTNER HYPE CYCLE FOR EDUCATION

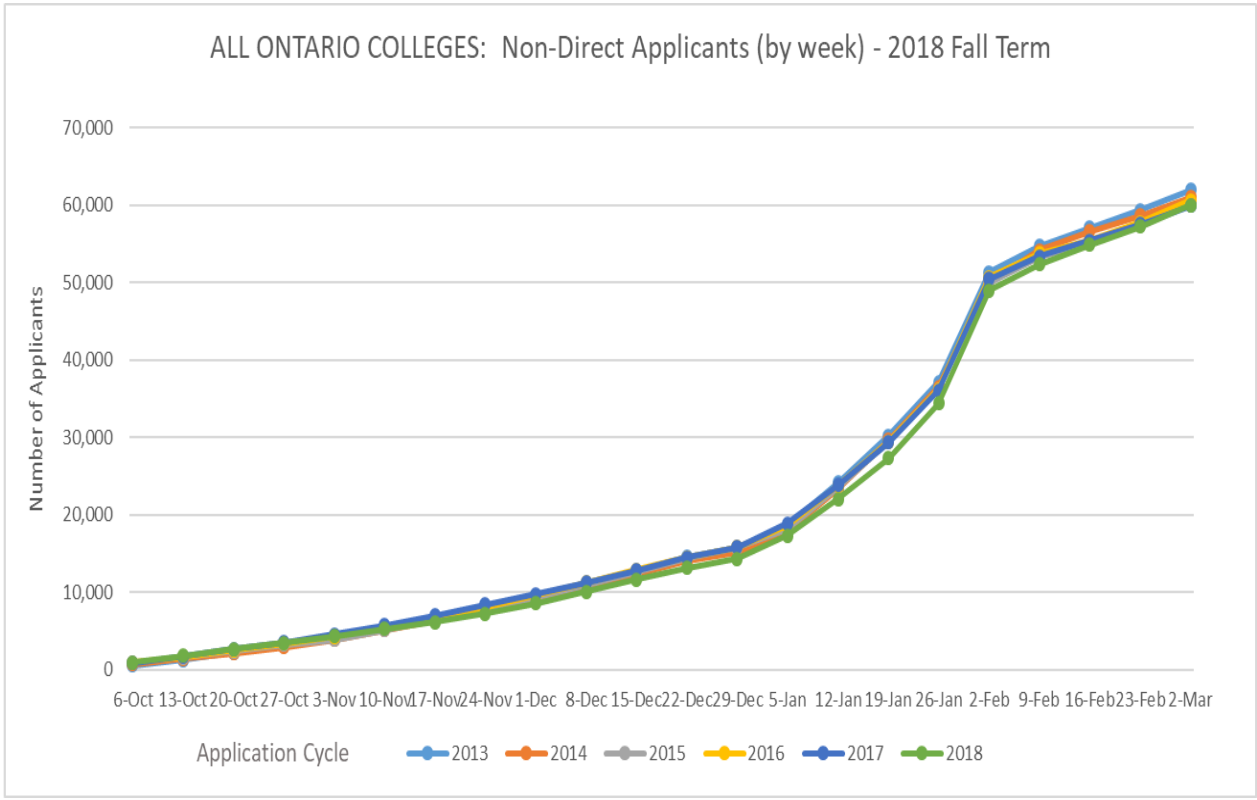


What does **tomorrow** look like?

Moore's Law & The Pace of Change – Close to Home

APPLICATION DATA OCTOBER 2013 TO MARCH 2018

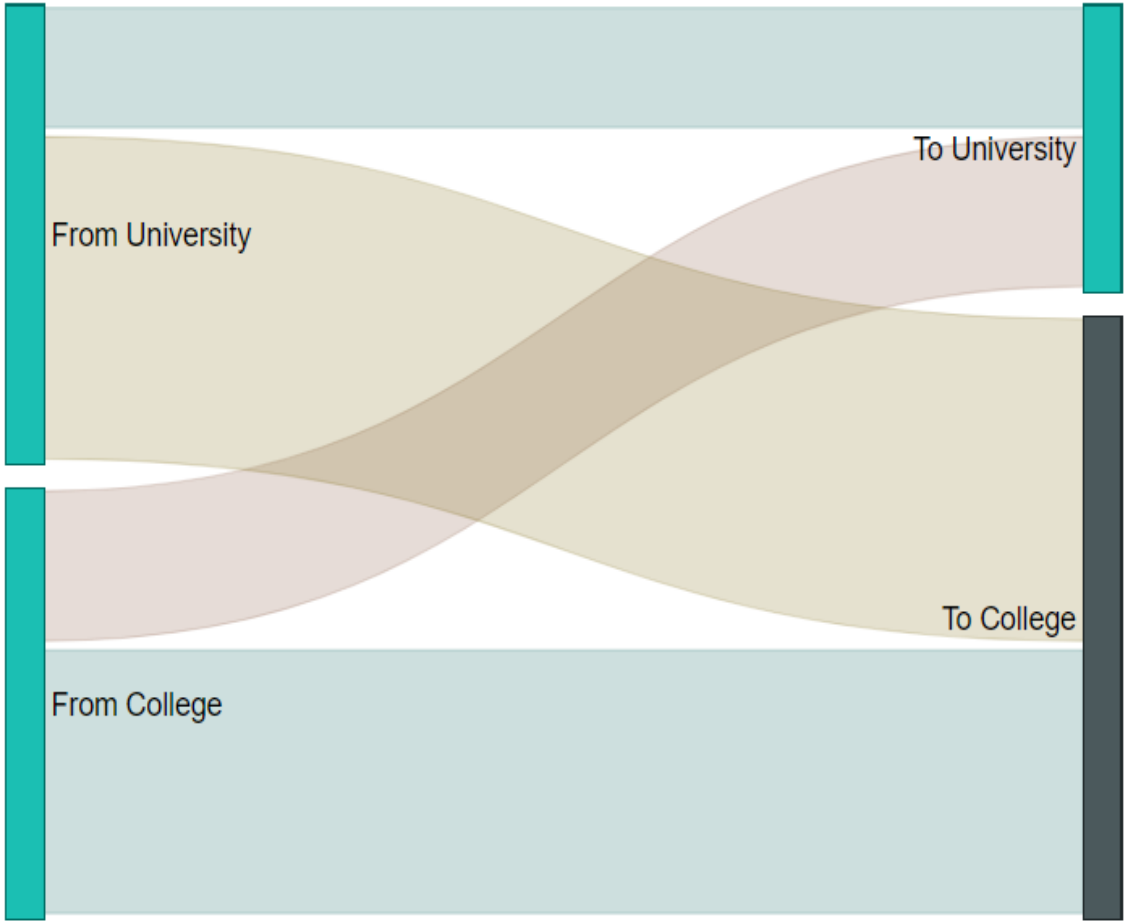




- Since 2013, Applications from Direct Applicants seeking to start College in the Fall term has steadily declined
- How does this demographic shift affect how we recruit, teach, and support our students?

New & Interesting Transfer Pathways

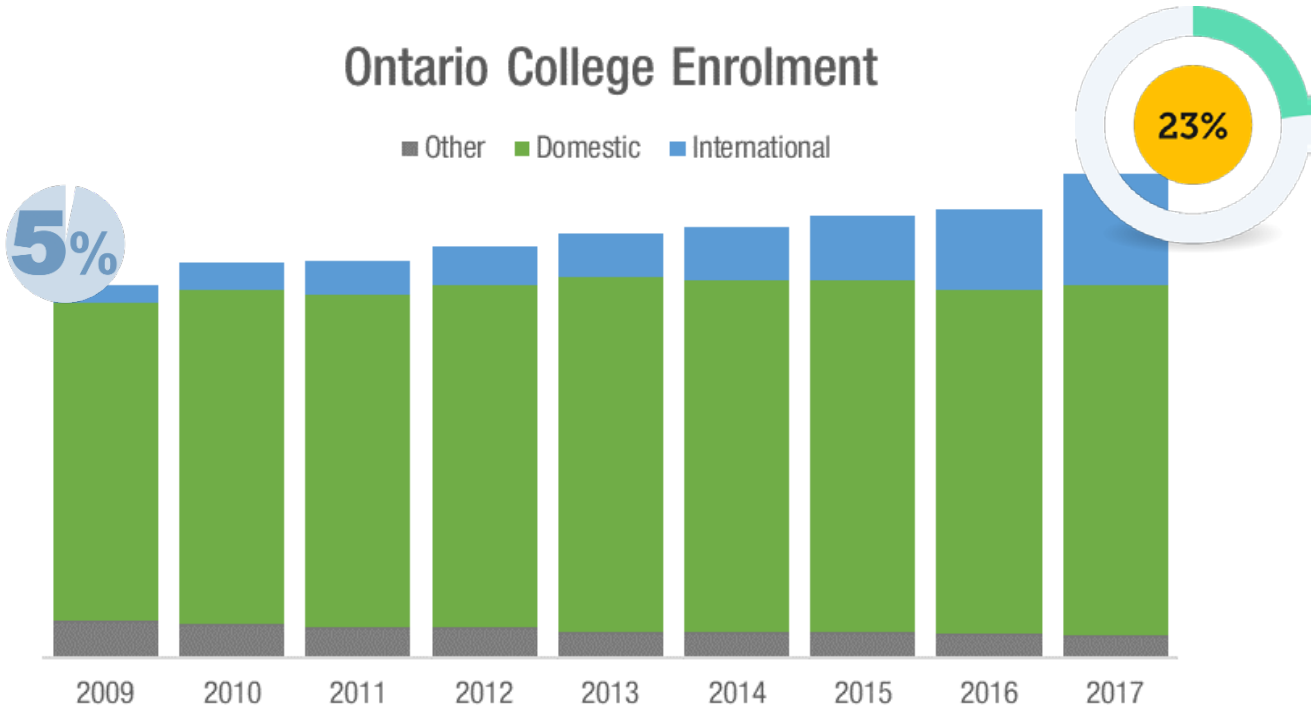
WHERE ARE TRANSCRIPTS GOING?



- Students seeking to transfer between institutions are required to submit transcripts to support their request.
- In 2016, more transcripts were transferred to colleges in support of students moving to new institutions (excluding professional programs such as teacher's college or medical school)
- How many of our governmental policies and personal actions reflect the traditional model of student progression, a model this data appears to refute?

The Changing Landscape of Enrolment

GROWING INTERNATIONAL ENROLMENT



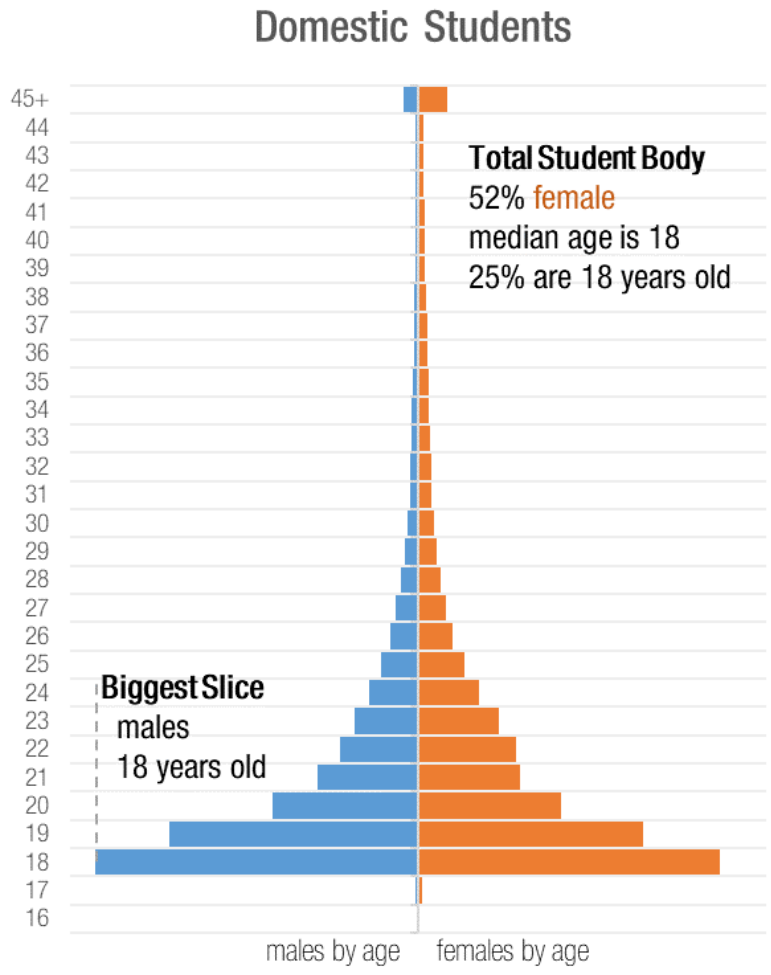
In 2009, international students represented just 5% of the student bodies at Ontario colleges; by 2017, the segment is now 23%.

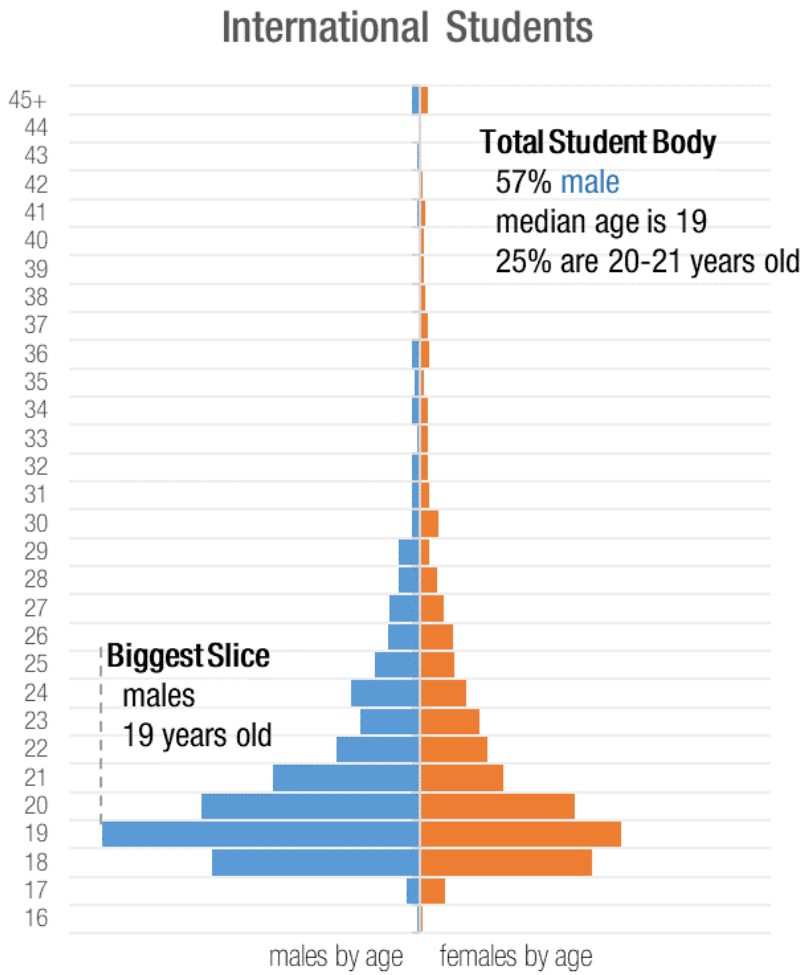
The domestic full-time student enrolment (across all years of enrolment) has seen some small year-over-year increases and decreases, growing a total of 10% over the last nine years.

In contrast, international student enrolment has expanded significantly each year, growing over 500% over nine years.

How The International Applicant Differs

CAN WE APPLY THE SAME THINKING TO INTERNATIONAL THAT WE DO FOR DOMESTIC?





- Does looking at different individual regions change the data? Gender? Field of study? Age?
- Should we use different technologies to recruit, support, and retain each segment of the student population?

Moore's Law Meets The OCAS Portfolio

OCAS – CIRCA 1997 – THE EARLY DECADE

	Applicant	OCAS	College
Personas:			
Product portfolio:	Explore / Apply	Manage	Notify
Domestic	• Paper applications	• Manual data entry	• Letter
Enabling Technologies:	• Paper guides	• Paper transcripts	

Moore's Law Meets The OCAS Portfolio

OCAS – CIRCA 2007 – THE DIGITIZE DECADE

	Applicant	OCAS	College			
Personas:	←	↔	→			
Product portfolio:	Explore	Apply	Manage	Notify	Integrate	Analyze
Domestic	+ **Website**	• Paper applications + **Domestic application**	• Manual data entry + **OCAS portal**	+ **Partner portal**	+ **Application status update**	+ **One-way data transfer** + **Payment Service Provider (PSP)**	+ **Reports**
Enabling Technologies:	• Paper guides + **Program Catalogue**	• Paper transcripts + **eTMS**	+ **CRM** + **Unified Access Gateway**			+ **Data warehouse**	

Moore's Law Meets The OCAS Portfolio

OCAS – 2017 – SUPPORT & ECOSYSTEM EXPANSION

Personas:	Applicant		OCAS		College			**Ecosystem**
Product portfolio:	Explore	Apply	Manage		Notify	Integrate	Analyze	Support	Partner
Domestic	• Website + **Mobile app** + **Organic search**	• Domestic application + **Custom branded application**	• OCAS portal	• Partner portal	• Application status update + **Email**	+ **Student Information System (SIS)** • Payment Service Provider (PSP)	• Reports + **Data as a Service**	+ **Tier 1 customer support** + **SLA dashboard** + **Research as a Service** + **Finance & payroll** + **Web development** + **Managed cloud**	+ **myBlueprint** + **College of Nurses** + **Ontario Learn** + **Skills Ontario** + **OCLS** + **ONCAT** + **ACE & CSCAU** + **Dual Credit & SCWI**
International		+ **International application**	+ **Agent portal**	+ **College portal**	+ **Application status update**	+ **Payment Service Provider (PSP)**	+ **Reports**		
Enabling Technologies:	• Program Catalogue	• Paper transcripts • eTMS + **Vouchers**	• CRM + **Identity & access management**				• Data warehouse		

Applying Exponential Automatic

OCAS – FUTURE – WHERE USERS ASK US TO GO NEXT

Apprenticeship application and registration?

Expand partnerships, e.g. MAESD apprenticeship, eCampusOntario

Pan-Canadian application service?

Personas: Applicant | OCAS/Agent | College | Ecosystem

Product portfolio:

Explore	Apply	Manage	Notify	Integrate	Analyze	Support	Partner
Domestic							
• Website • Mobile	• Domestic	• OCAS portal	• Partner portal	• Application status update email	• Student Information System (SIS) • Payment Service Provider (PSP)	• Reports • Data as a Service	• Tier 1 customer support • Web development • Managed cloud	• myBlueprint • College of Nurses • Ontario Learn • Skills Ontario • OCLS • ONCAT • ACE & CSCAU • Dual Credit & SCWI
International								
	• International	• Agent portal		Application status update	• Payment Service Provider (PSP)			
Enabling Technologies:								
• Program Catalog	• Paper	• CRM • Identity & access management						

Improve user experience and add international programs

Increase automation and machine learning

Enhance reporting, analytics and applied research

Build enhancements, e.g. application optimization, agency commissions

Optimize SIS integrations

Simplify back end systems to create a 'best of both' application experience

How To Navigate Through An Uncertain Future

VS

OCAS' Compass

College Users

- College Executives
- College Administration Leaders
- College Service Delivery/ Operations Staff
- College Marketing
- College Institutional Researchers

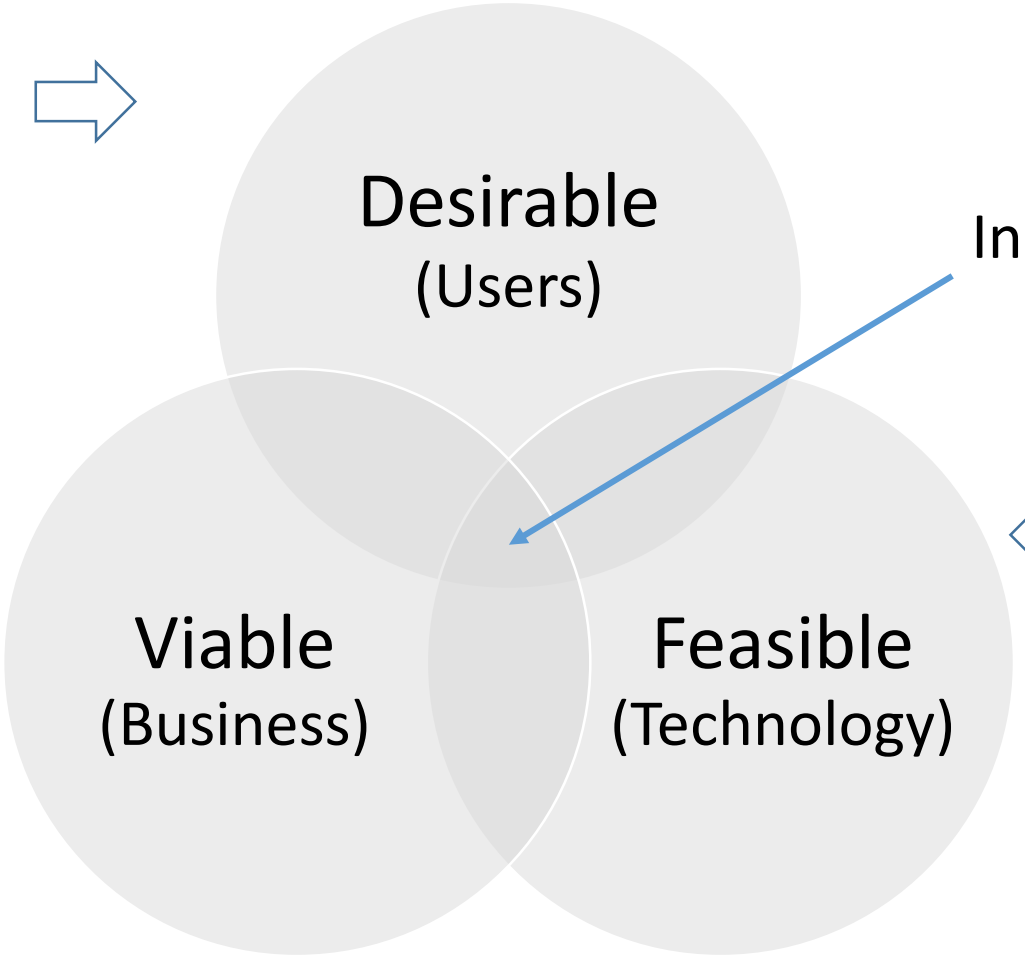
Non-College Users

- Applicants
- Recruitment Partners
- Ecosystem Partners
- OCAS Corporate Staff
- OCAS Service Delivery/ Operations Staff

User Needs

Why Is This Important?

Start here
You create solutions that solve real problems



Don’t start here
You create solutions that are seeking a problem to solve

Ignoring Your Compass Can Be Fatal

Compass Reading	Who Listened?	Who Didn't?
Ridiculous late fees	NETFLIX	BLOCKBUSTER
Limited access and fare control	UBER	TAXI
Forced to buy full-length albums		TOWER RECORDS
Poor customer service and experience	amazon	SEARS
Limited availability and pricing options	airbnb	Hilton

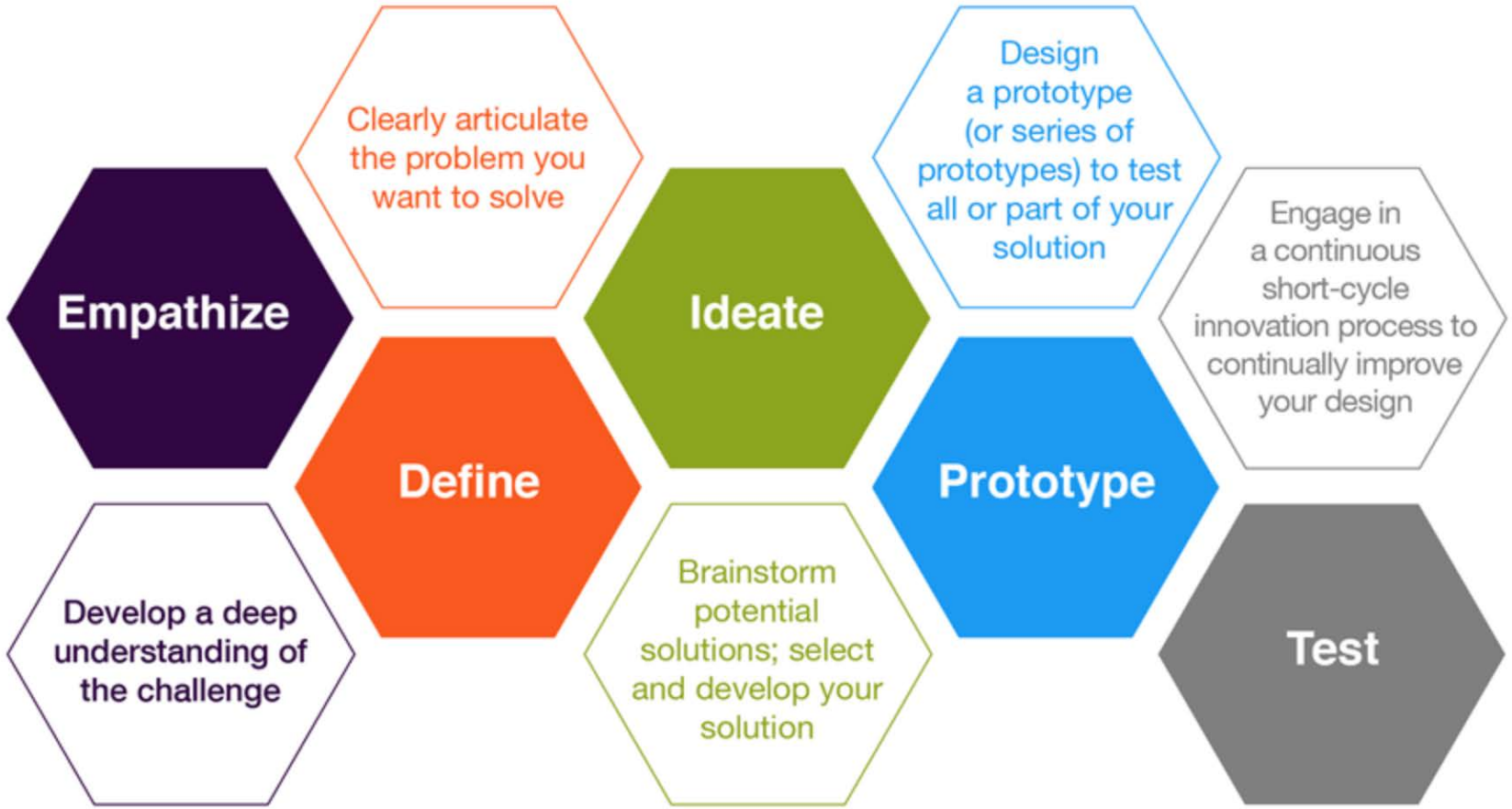
Technology by itself is not the disruptor. Not being user-centred is.

Listen To Users + Leverage Technology – Easy Right?

"If I had asked people what they wanted, they would have said faster horses."

"A lot of times, people don't know what they want until you show it to them."

How To Avoid 'Faster Horses' With User-Centred Design

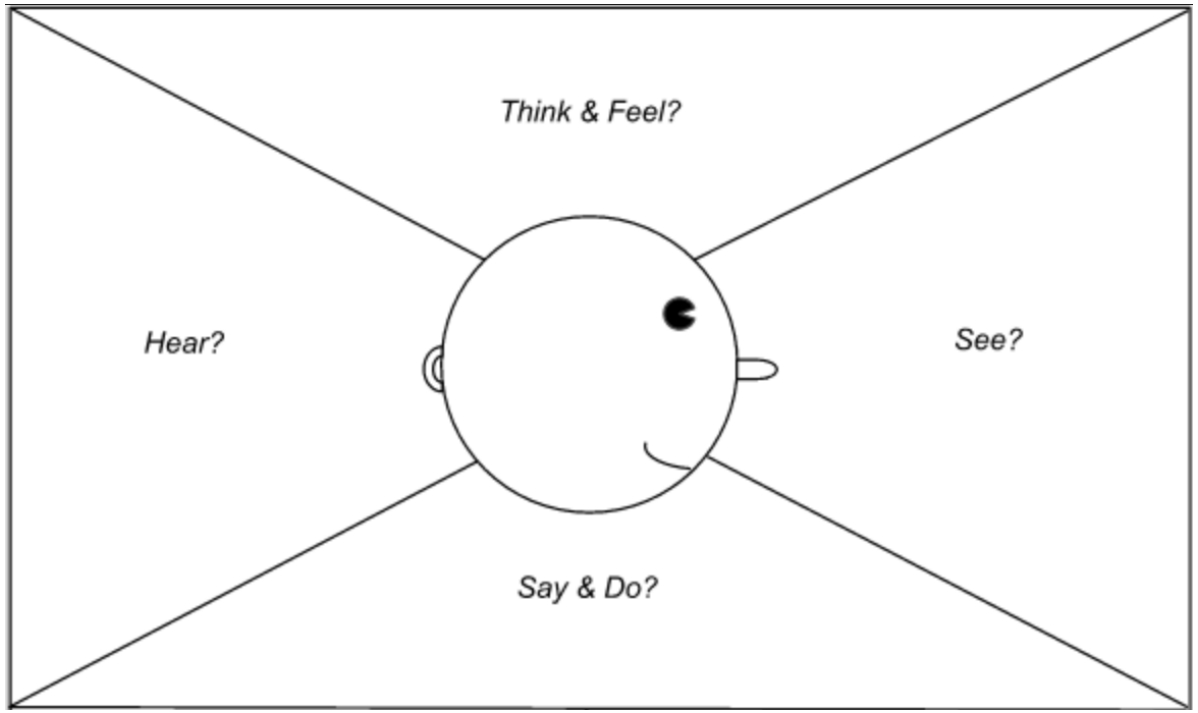


Source: citl.illinois.edu, 2018

Empathize With Your Users

Empathize

Empathy Map:



Ask open-ended questions: "tell me about the last time you…"

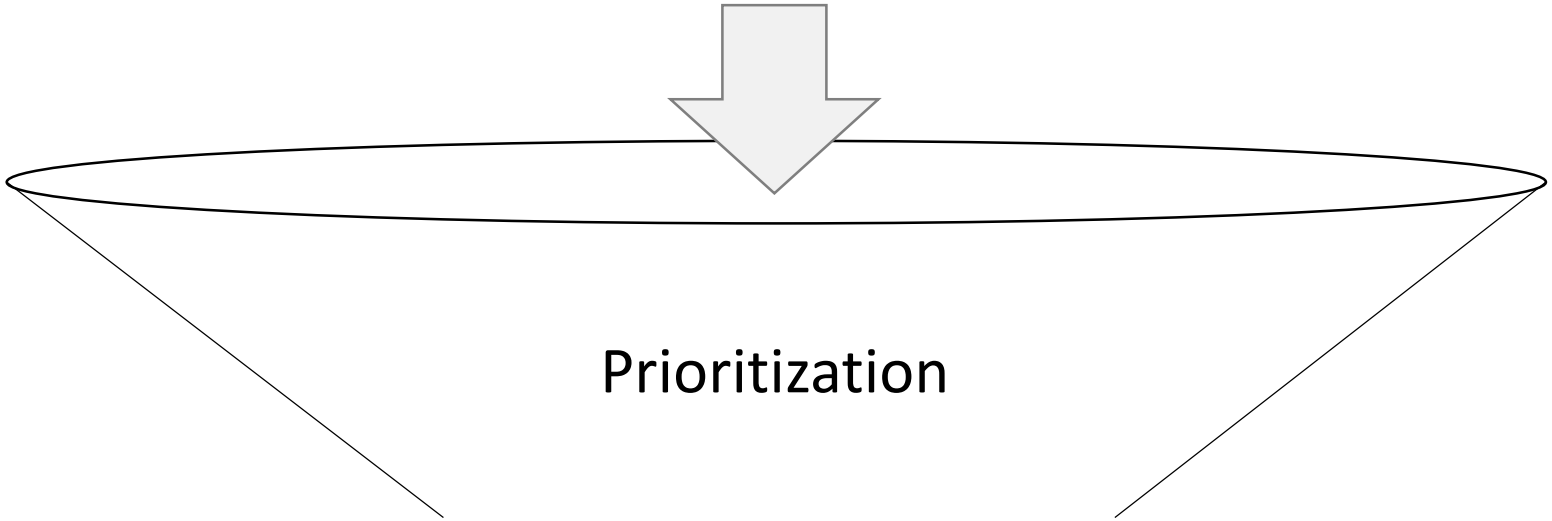
How OCAS Empathizes With Users

Empathize

Business Advisory Committee Integrated User Group Hey OCAS! Market Research

Innovation Advisory Committee OCAS Employees OCAS Board CRALO Committees

Usability Testing OCAS CEO & Execs OCAS Contact Centre



Crowdsourced Feedback

Empathize

REGISTER FOR THE HEYOCAS! PORTAL AT [HTTPS://HEY.OCAS.CA](https://hey.ocas.ca)

Share Your Feedback

Track Implementation Status

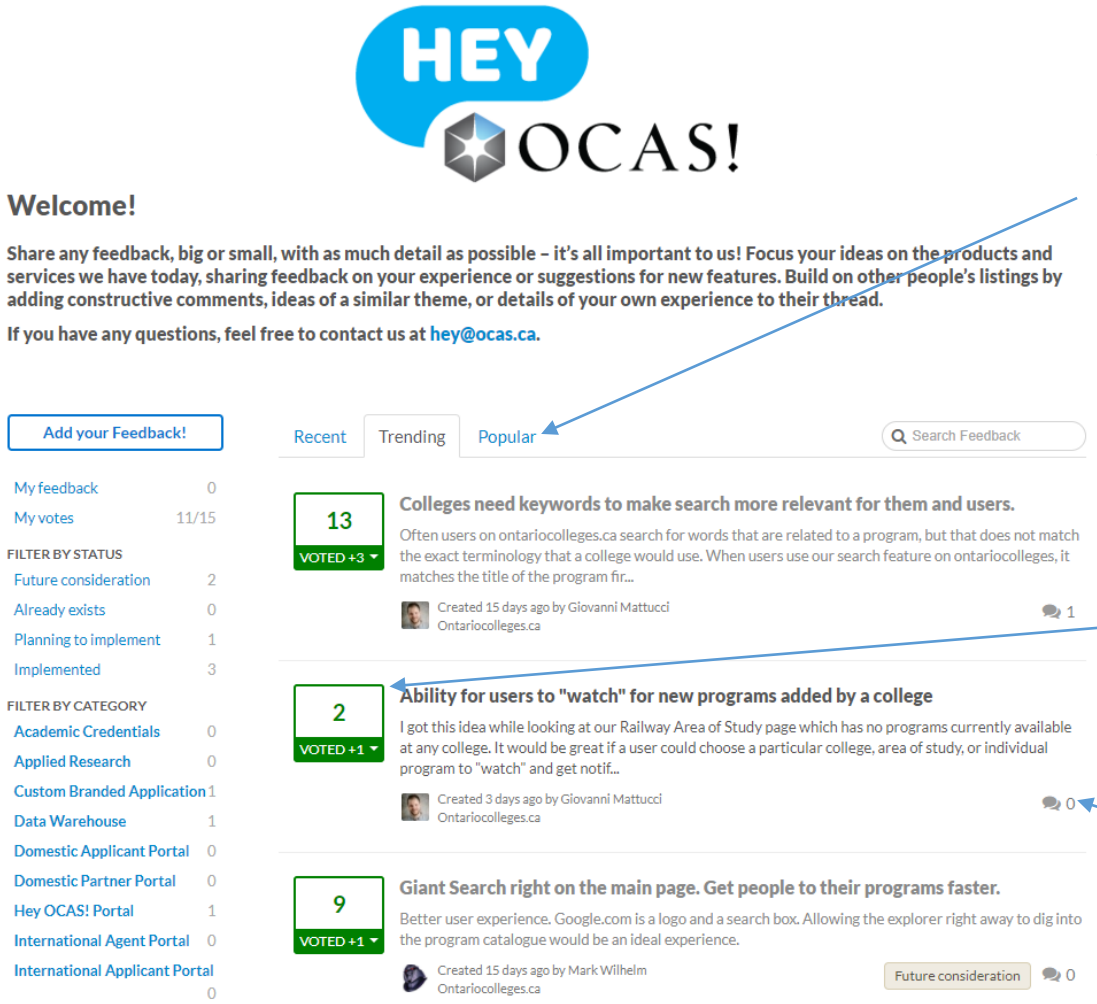
Find The Products and Services You Are Most Interested In

View Recent, Trending and Popular Feedback

Search For Feedback

Vote For Feedback You Would Like To See Delivered

Comment on Feedback



How OCAS Uses Data

Empathize

APPLICANT SURVEY AT A GLANCE

EN **20,990** responses to the English Applicant Experience Survey

FR **531** responses to the French Applicant Experience Survey

Top 5 information sources used:

- Official College Website
- Friends/Family
- College Program Guides
- Ontario Colleges Website
- High School Guidance Counsellor

1 2 3 **92%** of respondents who selected multiple programs ranked them in order of preference

17% delayed their application to see how the labour dispute resolved

89% would still have applied to College even if the term would have been cancelled entirely

$ **14%** would not have applied without being eligible for OSAP funding. More respondents selected OSAP than any other source of funding.

Define The Right Problems To Solve

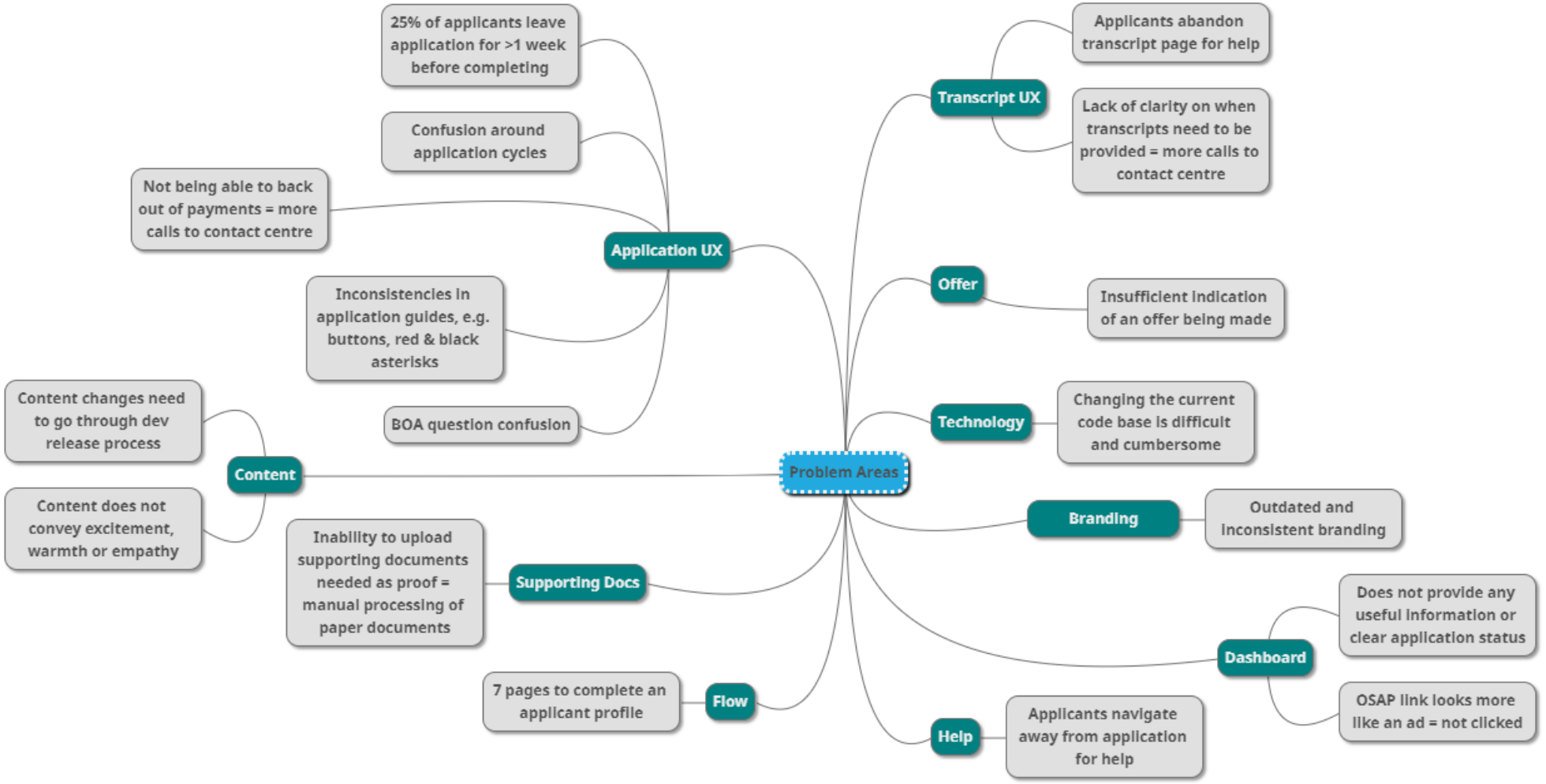
Define

Needs	+	Insights	=	Interesting Problems
Things that your user is trying to do		Other things that help you understand your user's worldview		How might we…? question to frame the problem in a human-centric way
Buy coffee quickly without leaving their car	+	Surprisingly, they love the conversations with drive-thru staff	=	How might we minimize the time customers spend at our drive-thru while maintaining the human interaction?

How OCAS Defines Problems

Define

APPLY REBUILD PROJECT: MARKET RESEARCH, DATA ANALYSIS, CONVERSATIONS, OBSERVATIONS

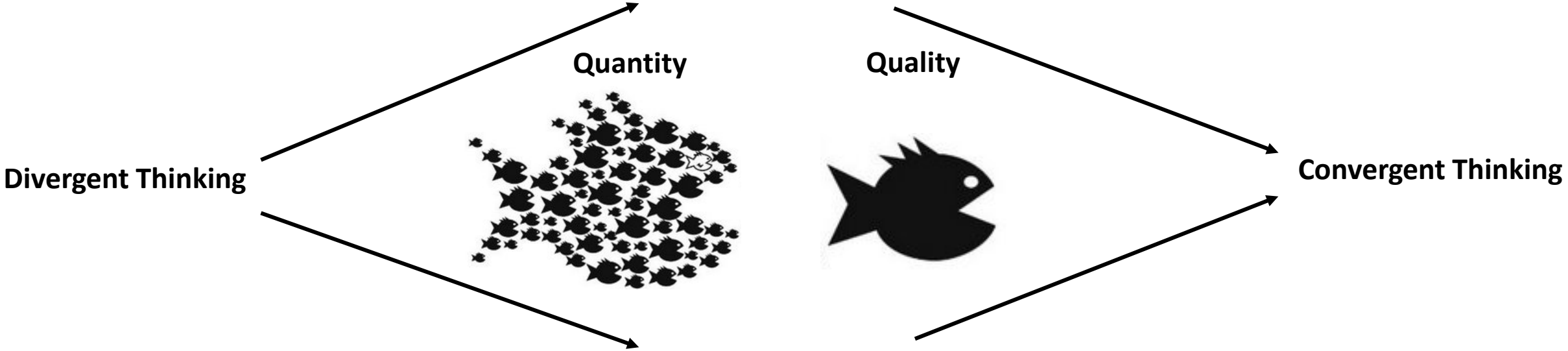


Ideate Potential Solutions

Ideate

"How to catch a big fish:
1. Catch a lot of fish.
2. Throw back all the little ones."

- Dr. Linda Carson, University of Waterloo

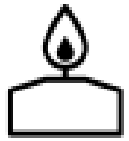


Think Like A Beginner

Ideate

"The electric light did not come from the continuous improvement of candles."

- Dr. Oren Harari, University of San Francisco



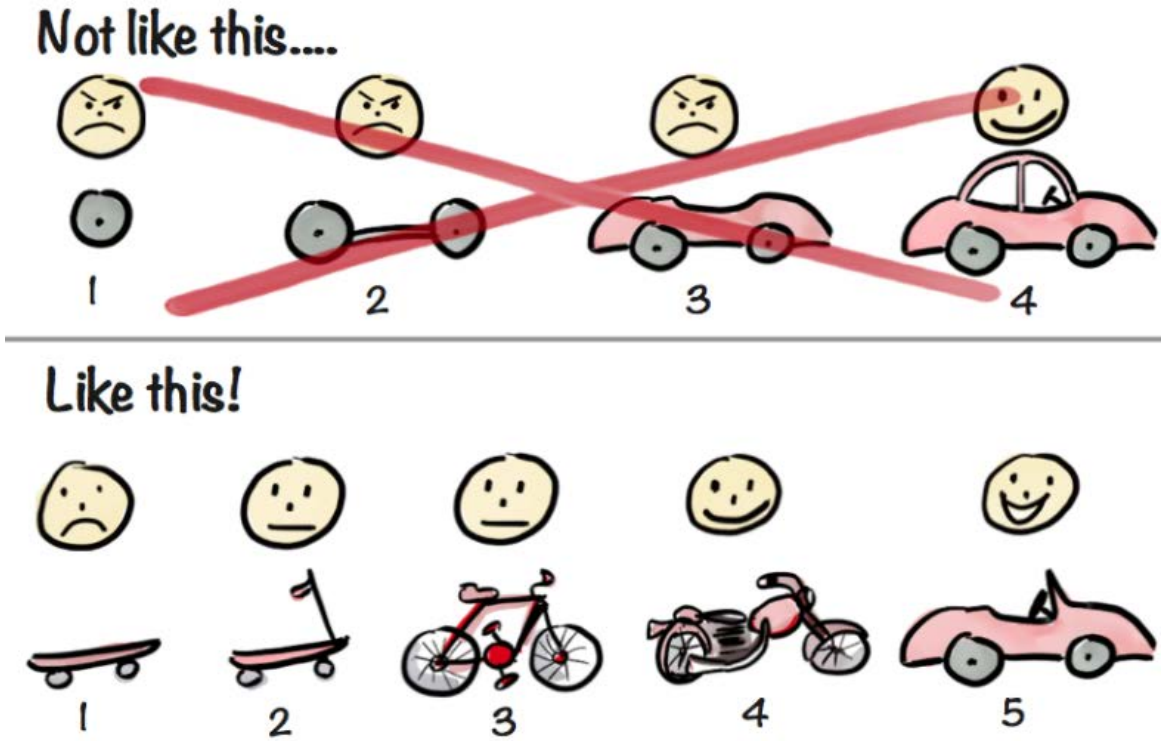
Beginner ⟺ Expert

How OCAS Ideates Potential Solutions

Ideate

CROSS-FUNCTIONAL TEAMS, WHITEBOARDS, STICKIES AND PLENTY OF COFFEE

Prototype &Iterate



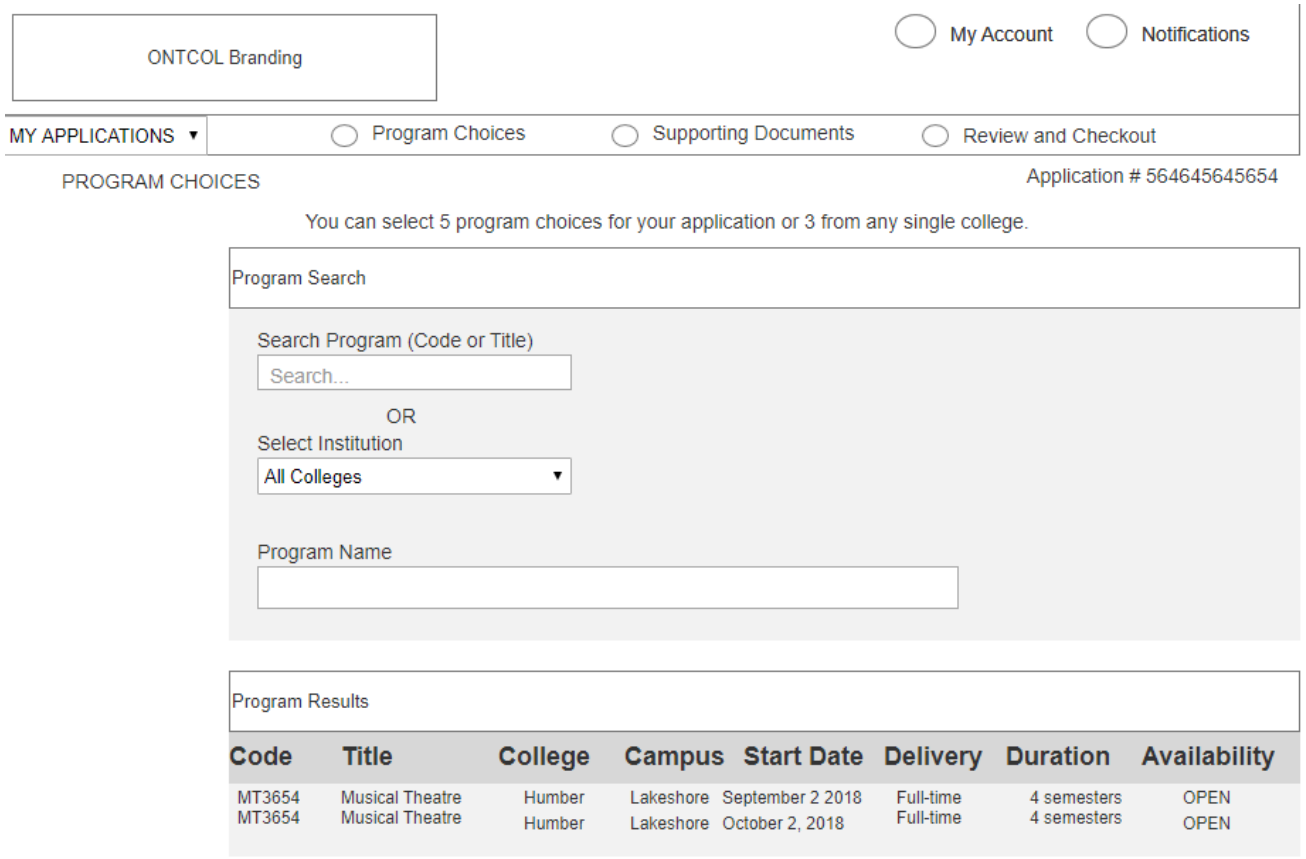
(Start Small) **Minimum Viable Product** → **Product Vision** **(Think Big)**

Source: Henrik Kniberg, 2016

How OCAS Prototypes

WIREFRAMES / MOCK UPS

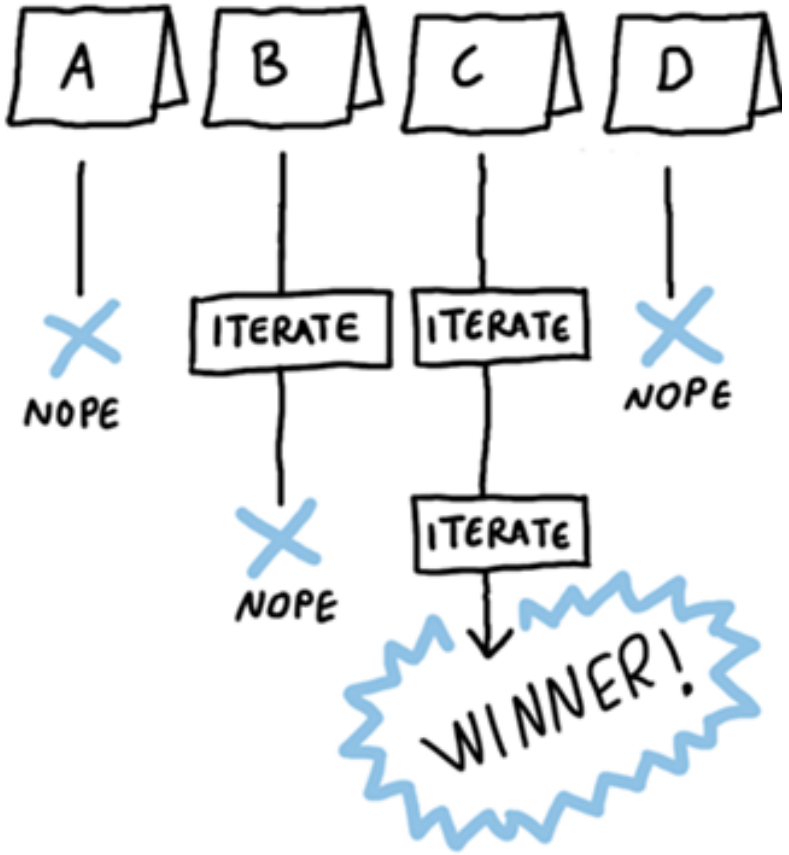
Prototype



Wireframes Work

Mock ups Work Too

Test and Learn

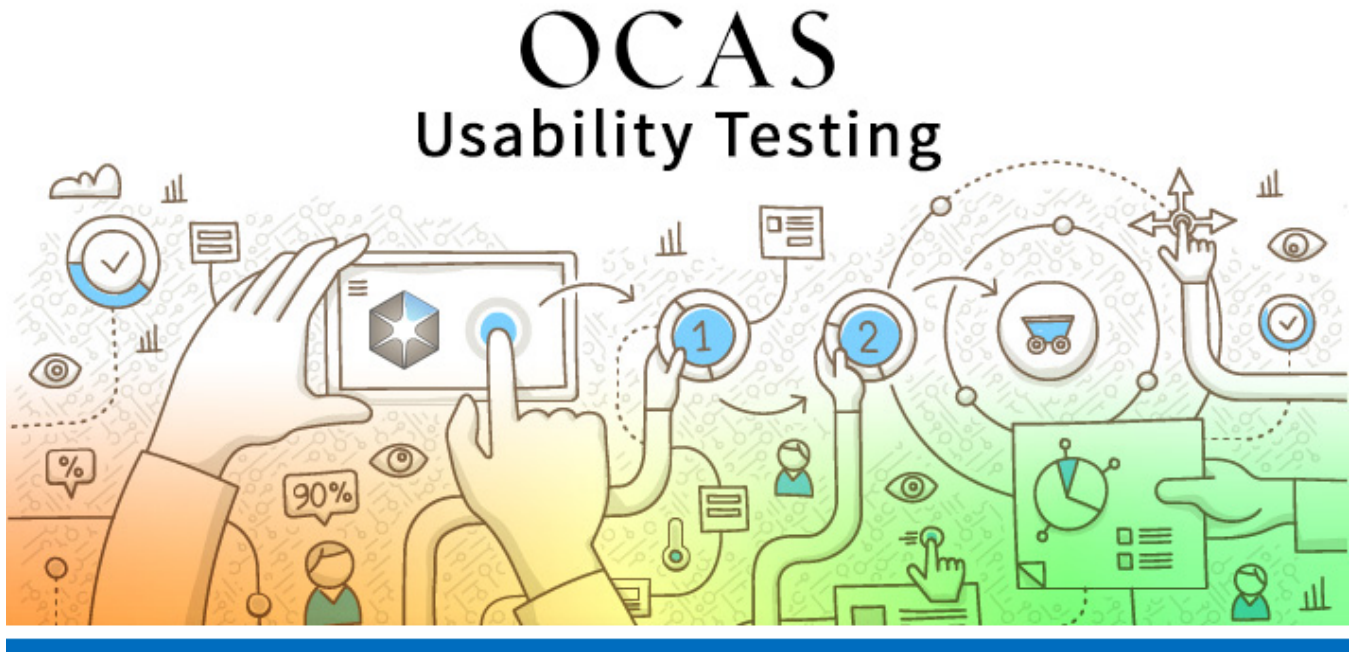


Source: businessillustrator.com, 2018

How OCAS Tests

USABILITY TESTING

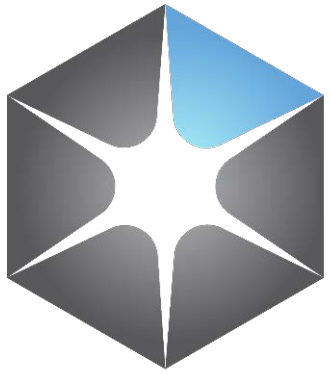
Test



1. Ask users to perform a task
2. Observe users
3. Draw conclusions about oversights or poor user experience

Takeaways

1. Be the thought-leader who illuminates how technology will shape the future of education
2. Users are your compass for navigating through an uncertain future
3. Start with empathy to better understand user needs and insights
4. Prototype and test to iterate towards innovative solutions



OCAS

Thank You

QUESTIONS?