

# OCLC Research

## Works in Progress Webinar:

### Deakin Genie

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Deakin University Library  
eSolutions – Deakin University



**Jane Miller**

Director Digital Library and Repositories



**Steve White**

Digital Solutions Manager, eSolutions



**Danielle Johnson**

Manager Digital Experience, Library



# About Deakin University

- Established in 1974 in Geelong, Victoria with a specialisation in distance education
- In 2019 Deakin
  - is ranked in the top 1% of Universities globally
  - has physical campuses at Geelong (2), Burwood and Warrnambool
  - retains its commitment to flexible and distance learning via its Cloud Campus
  - has a strong learning teaching and research focus in a range of areas including health sciences, exercise science, creative arts, law, information technology and education.
- Deakin is regarded as a being at the forefront of digital innovation in education both nationally and internationally



“Deakin is one of a new breed of global universities - agile, dynamic and innovative.”

**PROFESSOR JANE DEN HOLLANDER AO  
DEAKIN UNIVERSITY VICE-CHANCELLOR**



# About Deakin University Library

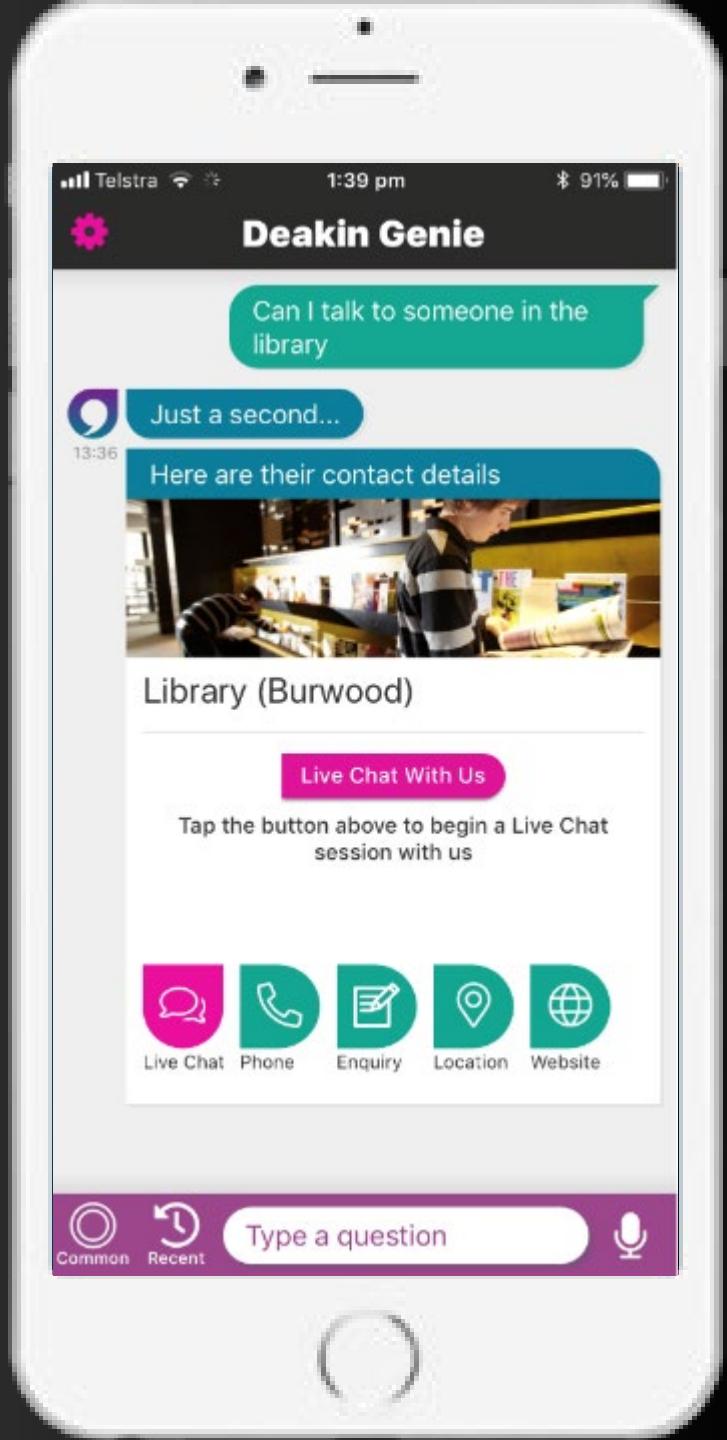
- Four directorates report to the University Librarian, Dr Craig Anderson
  - Client Services
  - Collections, Copyright and Licencing,
  - Digital Libraries and Repositories
  - Information and Records Services
- Four highly used physical campus library spaces with collections increasingly based on electronic resources.
- Deakin Library shares the University's commitment to digital innovation
- The Genie project is an opportunity for the Library to collaborate on an important strategic initiative



# About Genie

- Launched in 2017
- A smart phone based virtual assistant offering personalised information and resources to student
- Utilises a combination of natural language, voice recognition and machine learning to build “conversations”
- Industry leading and recognised as such with a number of awards including:
  - iTnews Benchmark Awards 2018
  - Reimagine Education Awards, by QS and Wharton Business School
  - IDG Communications Announces Digital Edge 50 Awards Winners
  - 2018 iAwards Victoria – Artificial Intelligence or Machine Learning Innovation of the Year
  - Victoria OpenGov Leadership Forum – Recognition of Excellence Award.



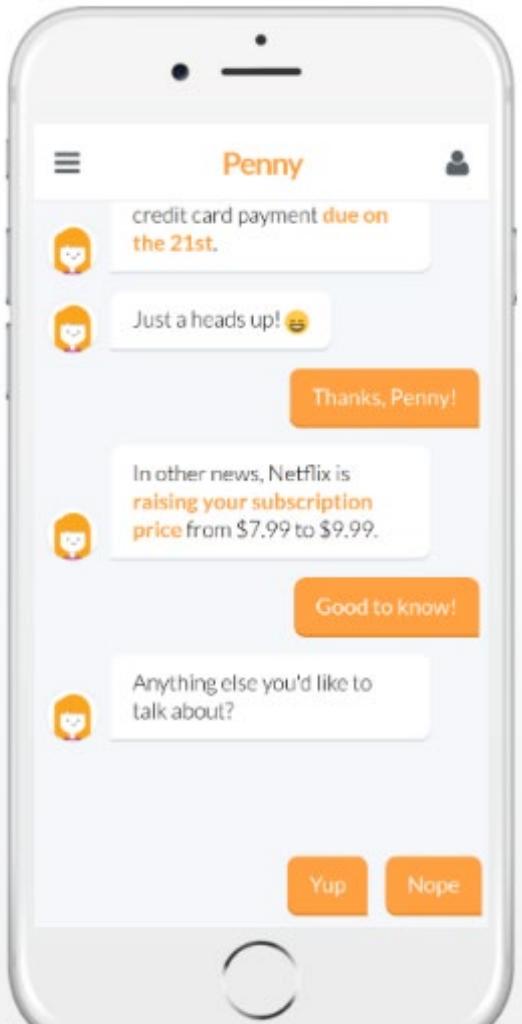


## Why Deakin Genie?

# Specialist digital assistants

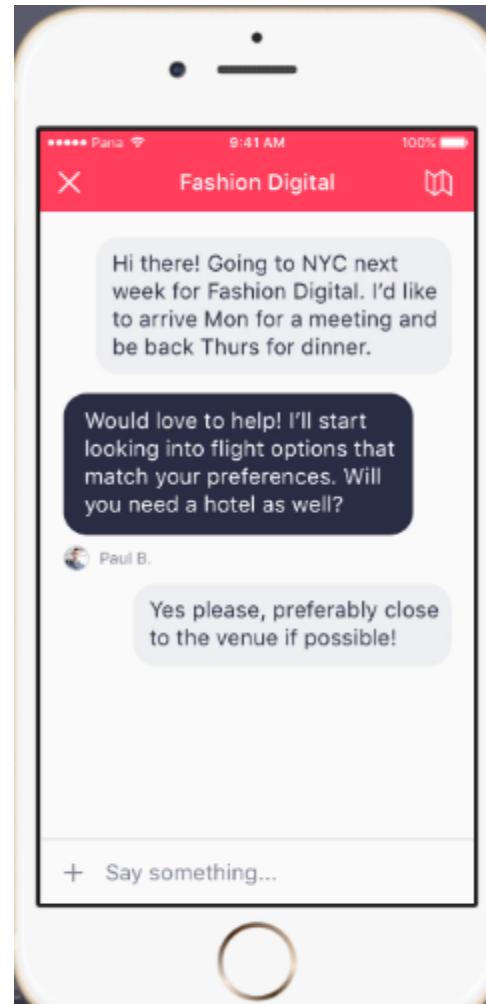
## Penny

Your personal finance coach



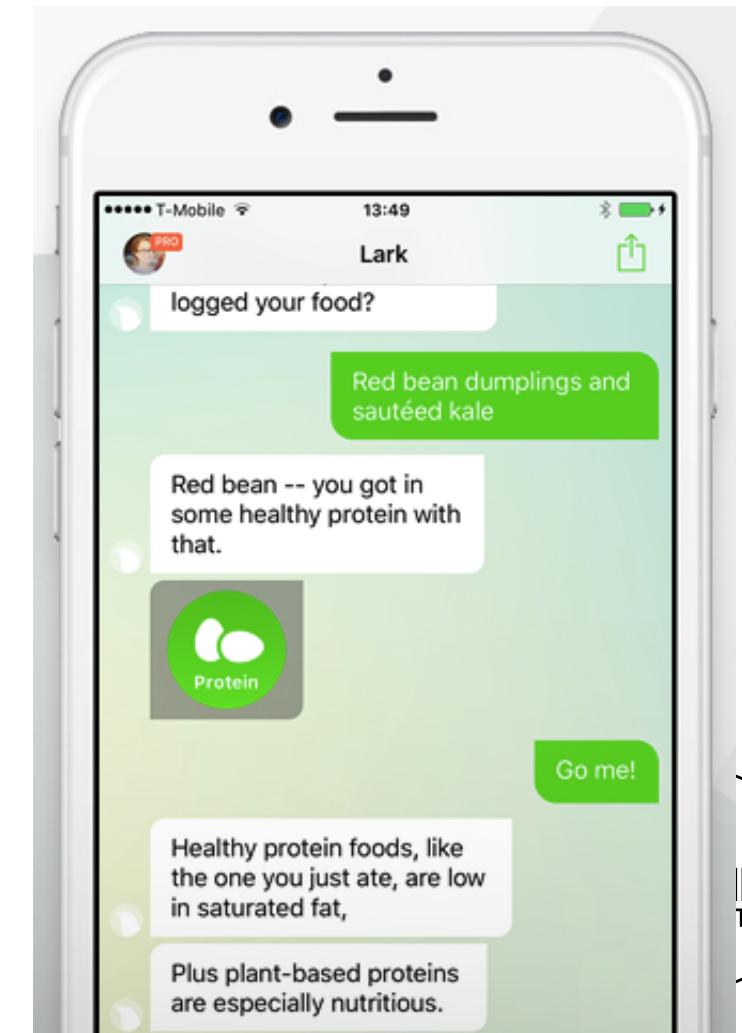
## Pana

Your virtual travel agent



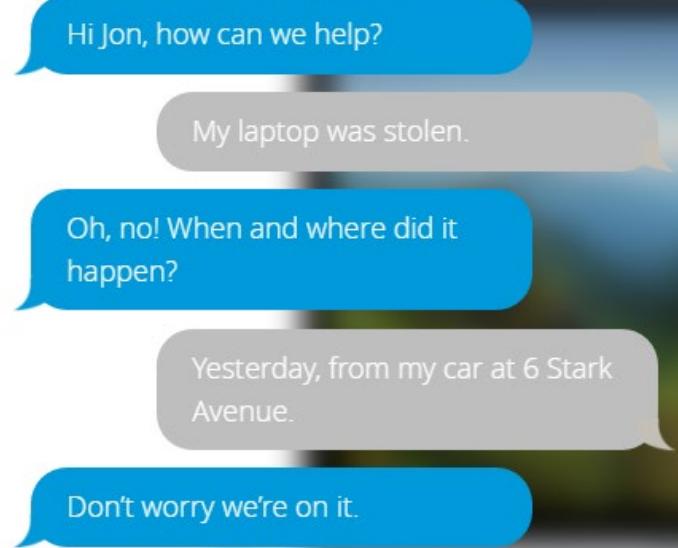
## Lark

Your weight loss coach

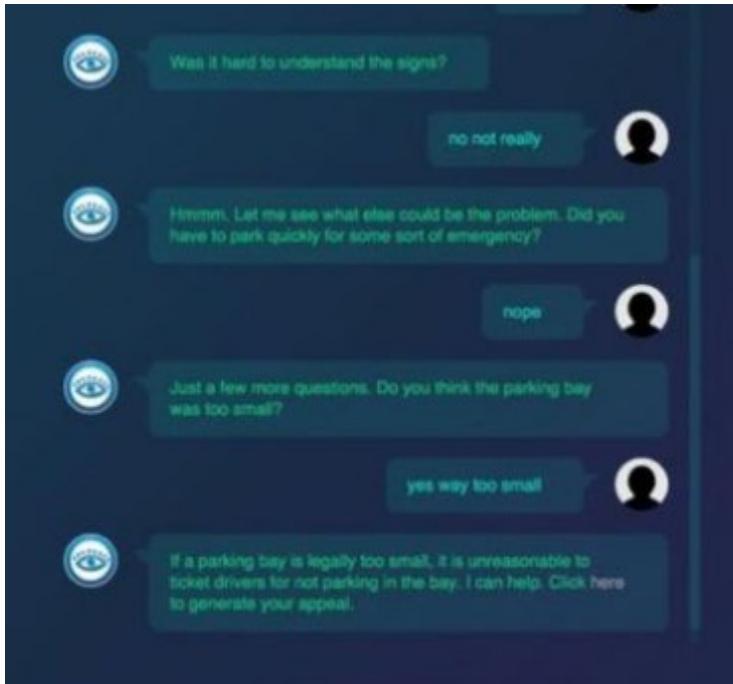


# Specialist digital assistants

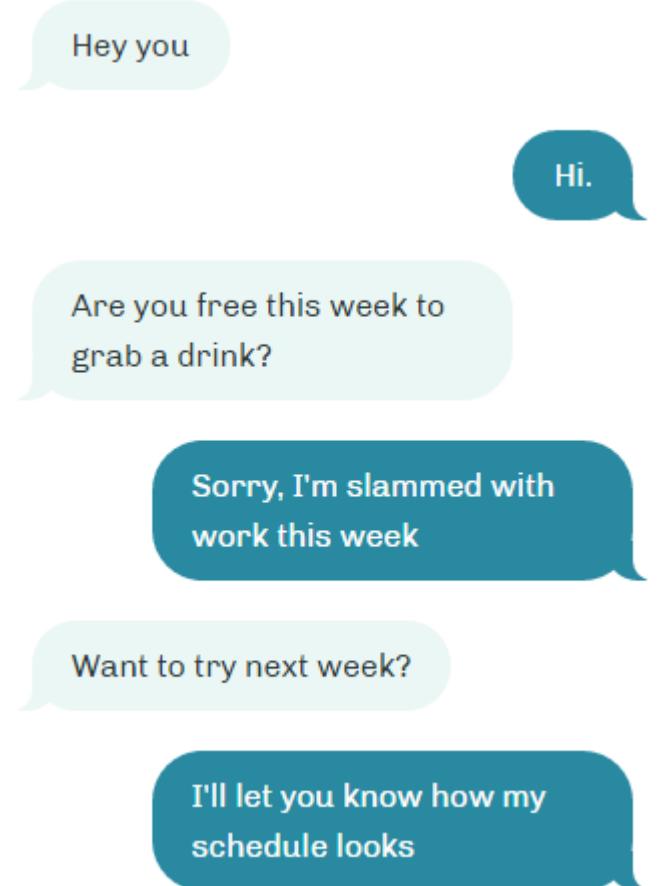
Trov  
Personal insurance



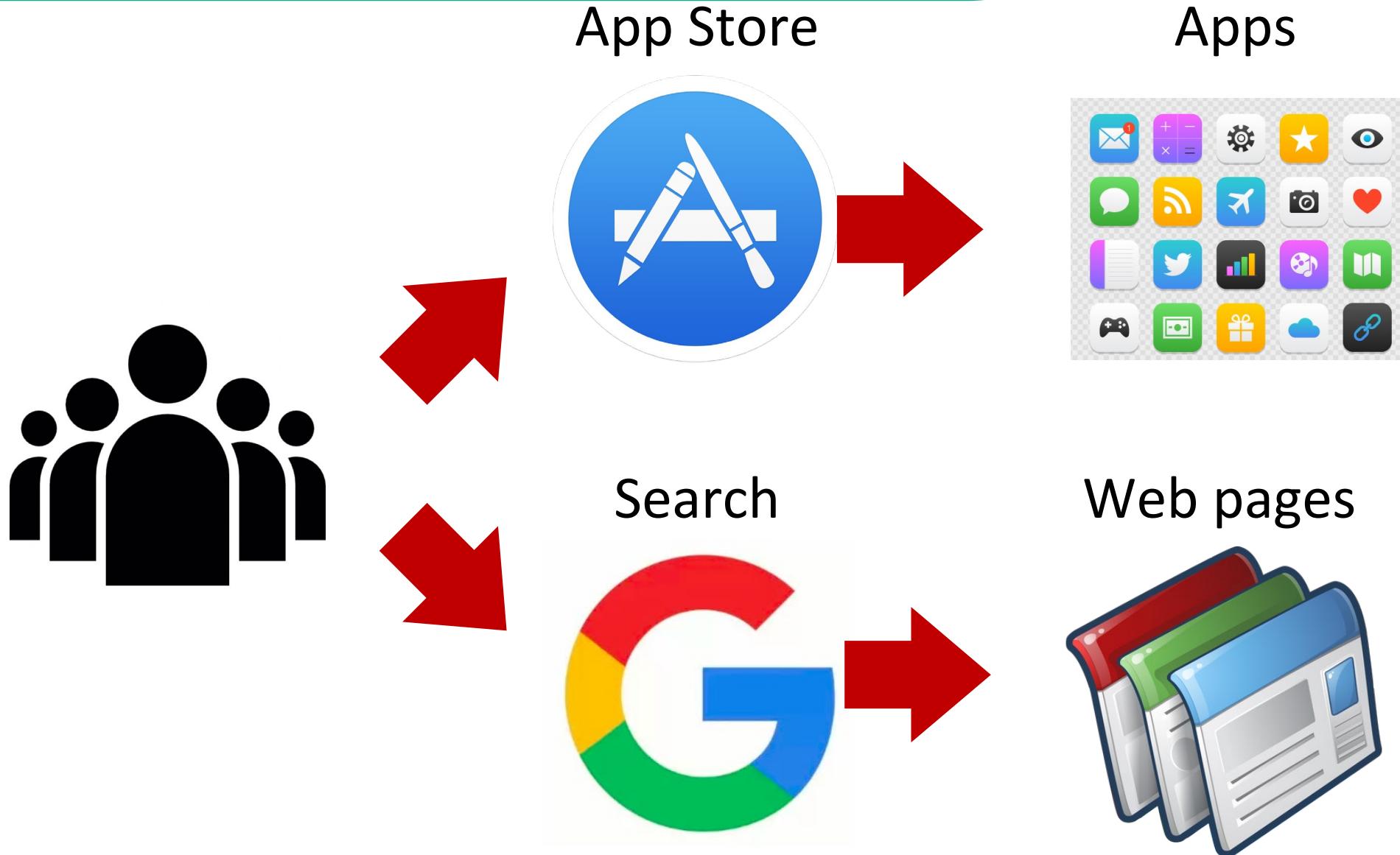
**Do not pay**  
Assesses parking ticket validity



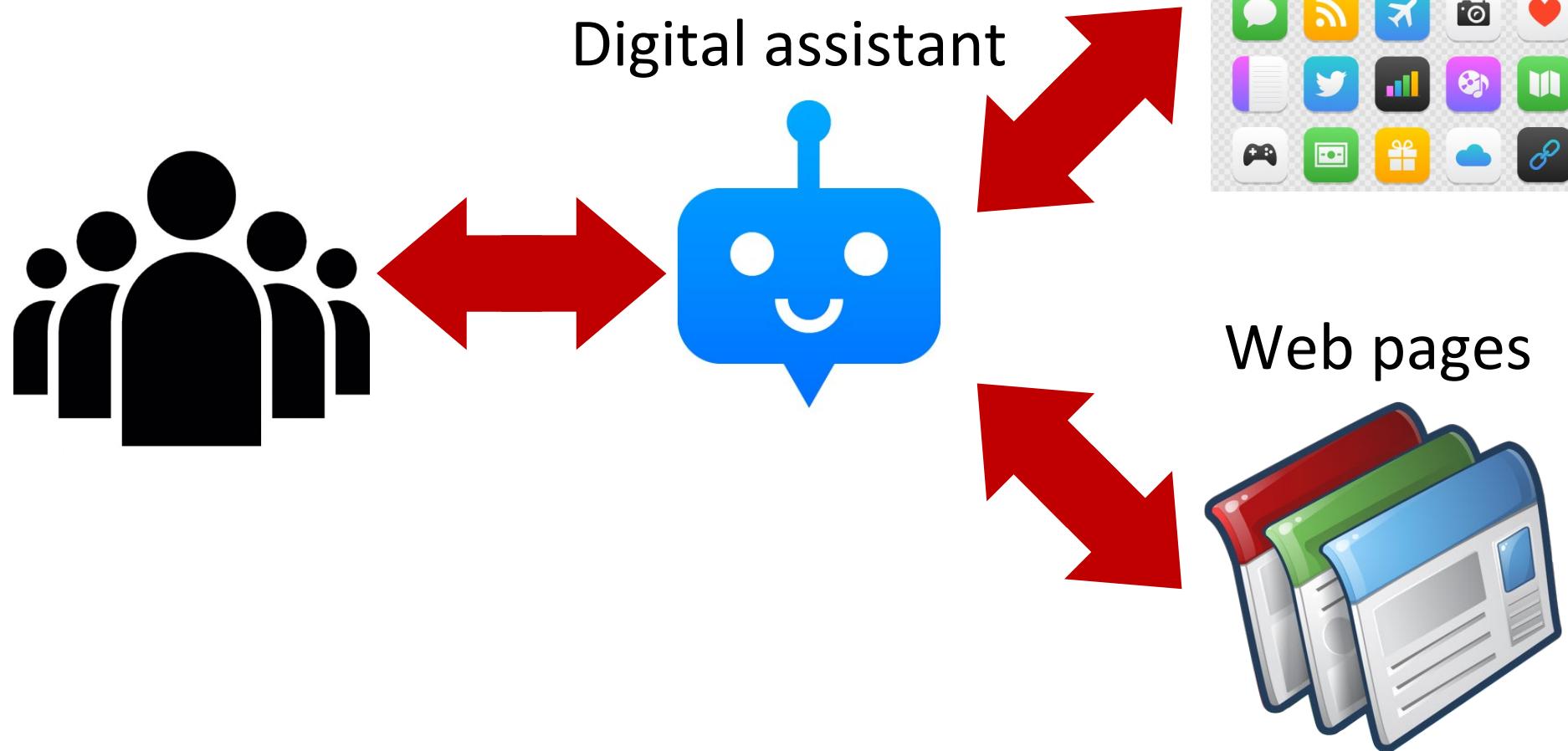
**Ghostbot**  
Dating avoidance texts



# The online world in 2016



# The online world emerging now



# The digital assistant arms race

SAMSUNG

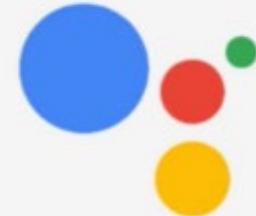


Bixby says hello

Facebook M



A personal assistant inside Messenger



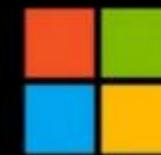
Meet your Google Assistant

amazon

alexa

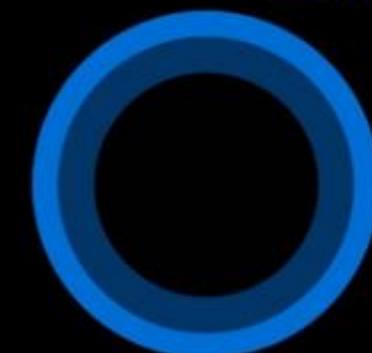


Siri

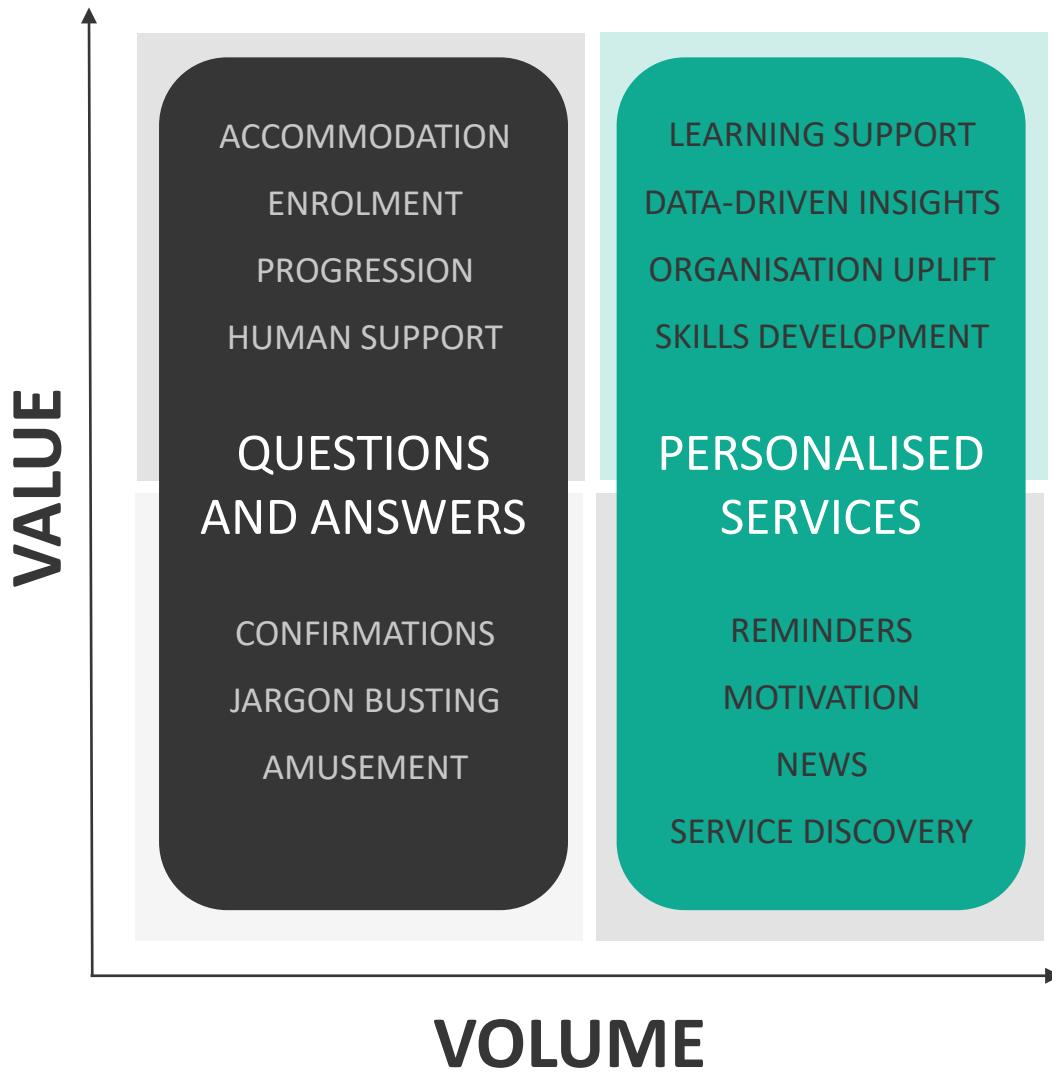


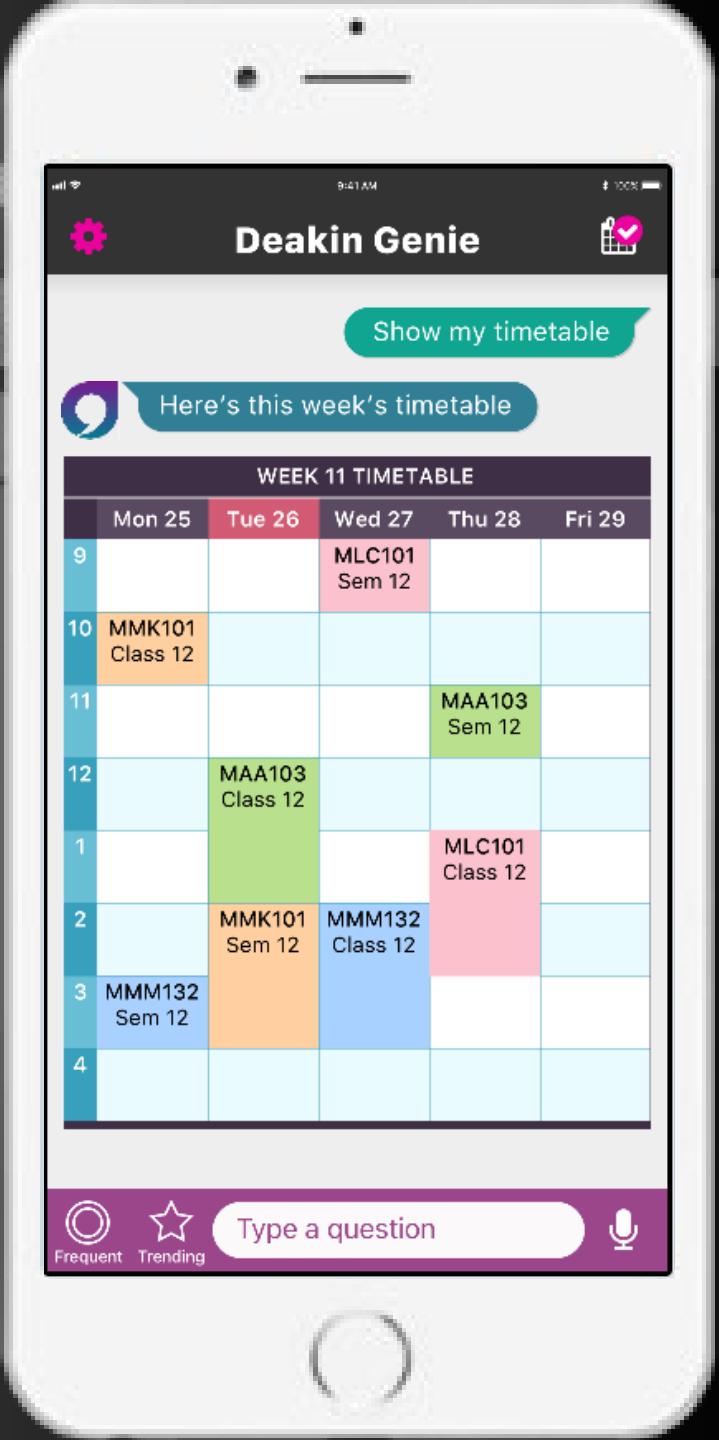
Microsoft

Hi. I'm Cortana.  
Ask me a question!



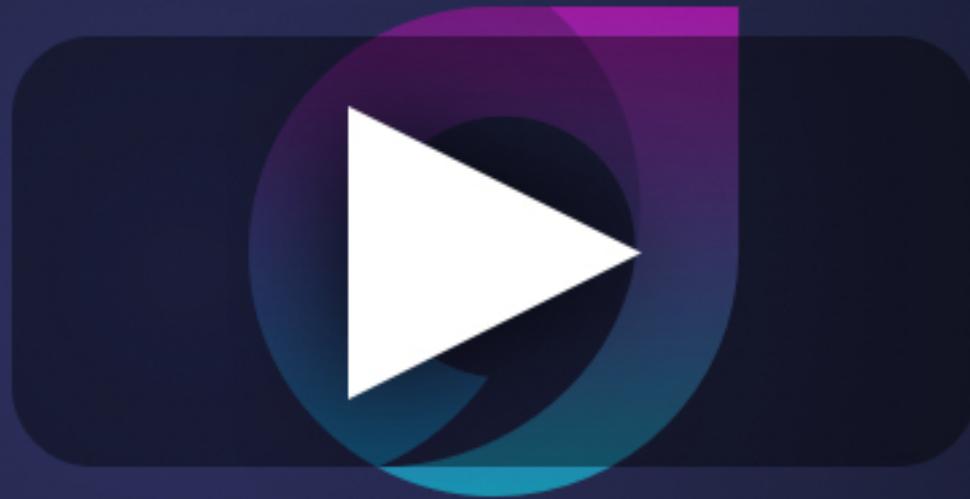
# Beyond questions and answers





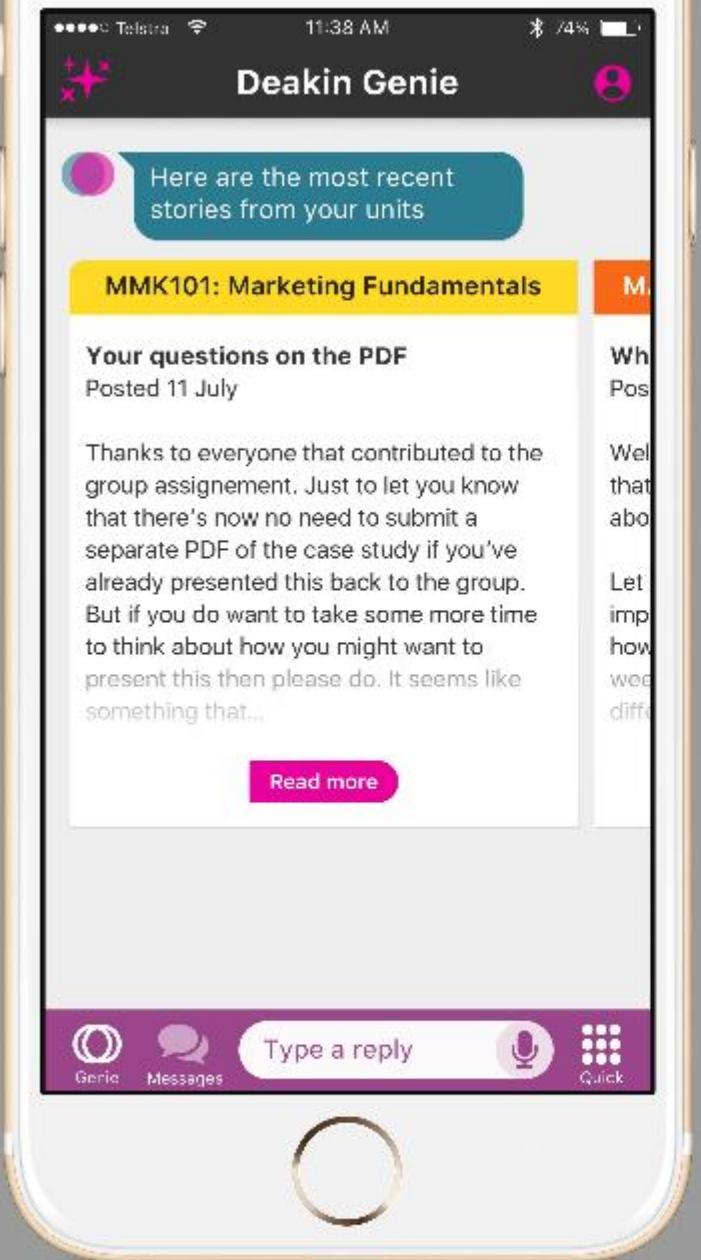
# GENIE

The smart personal assistant  
here to help students succeed

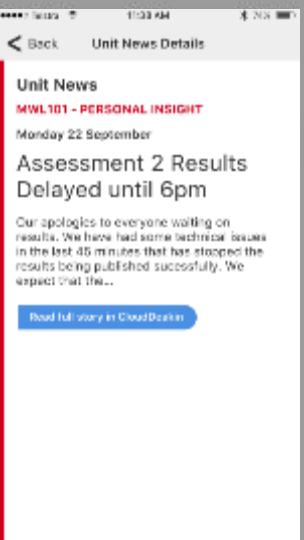


# LEARNING SUPPORT

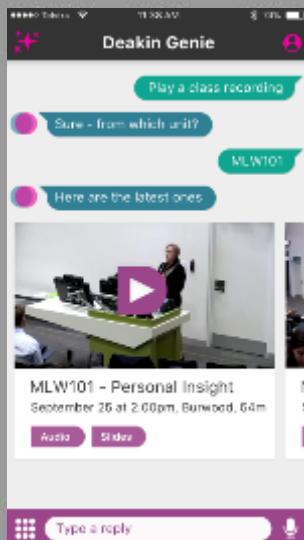
Offering learning materials and support on each student's terms



**Quick resources access**  
CloudDeakin and the Library



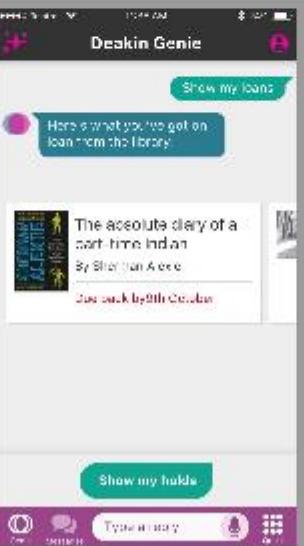
Latest updates  
via notification



## Class resources



## Readings



## Library loans and holds



# Available computers



## Library Search

# TIMETABLE AND IMPORTANT DATES

Finding classes  
and meeting  
deadlines is so  
much easier



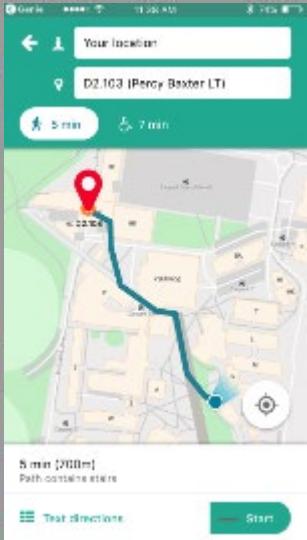
Timetable and important dates  
Information and assistance



Assignment  
due dates



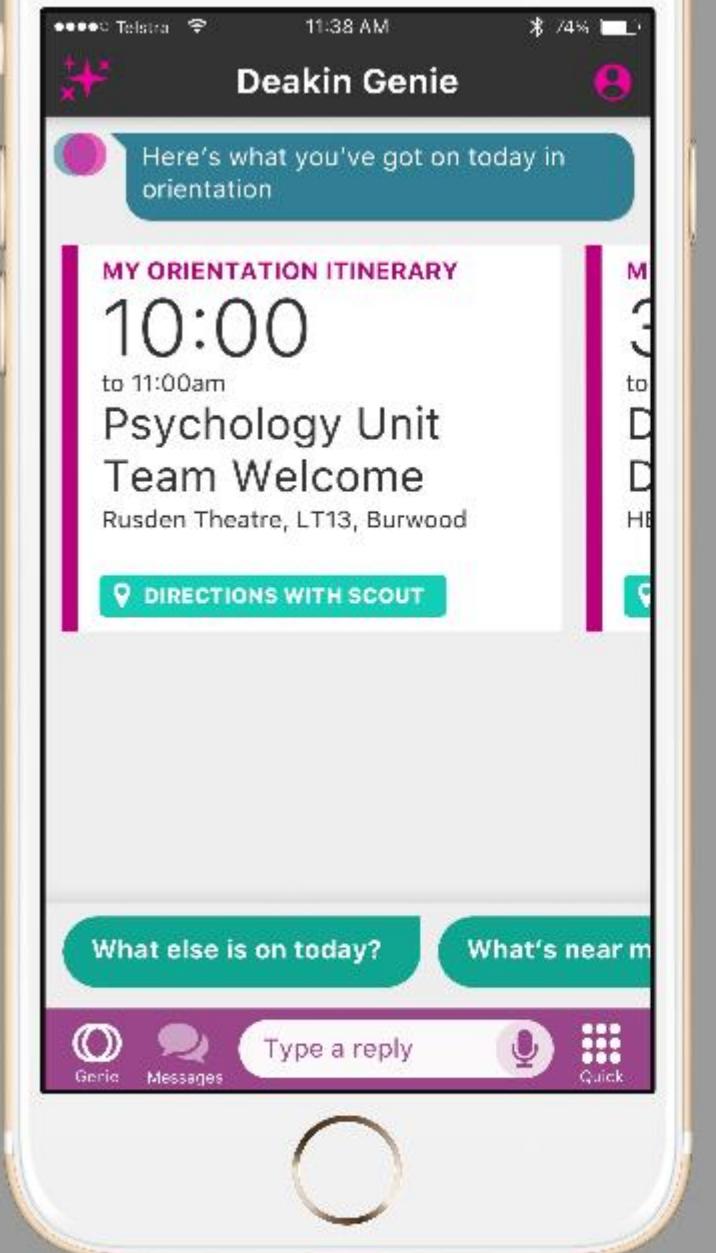
Important  
trimester dates



Clear links to  
wayfinding

# ORIENTATION

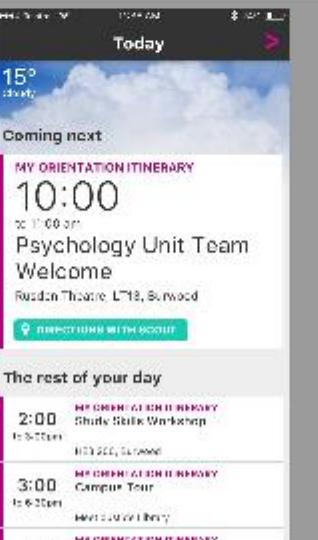
Easing the transition from school to University



First experiences of Genie and University



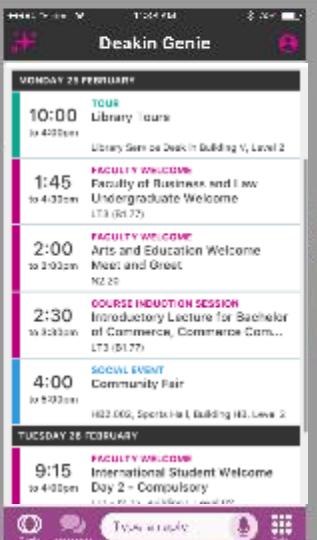
Orientation calendar events



Smart Briefing



Creating a custom itinerary



Orientation Itinerary



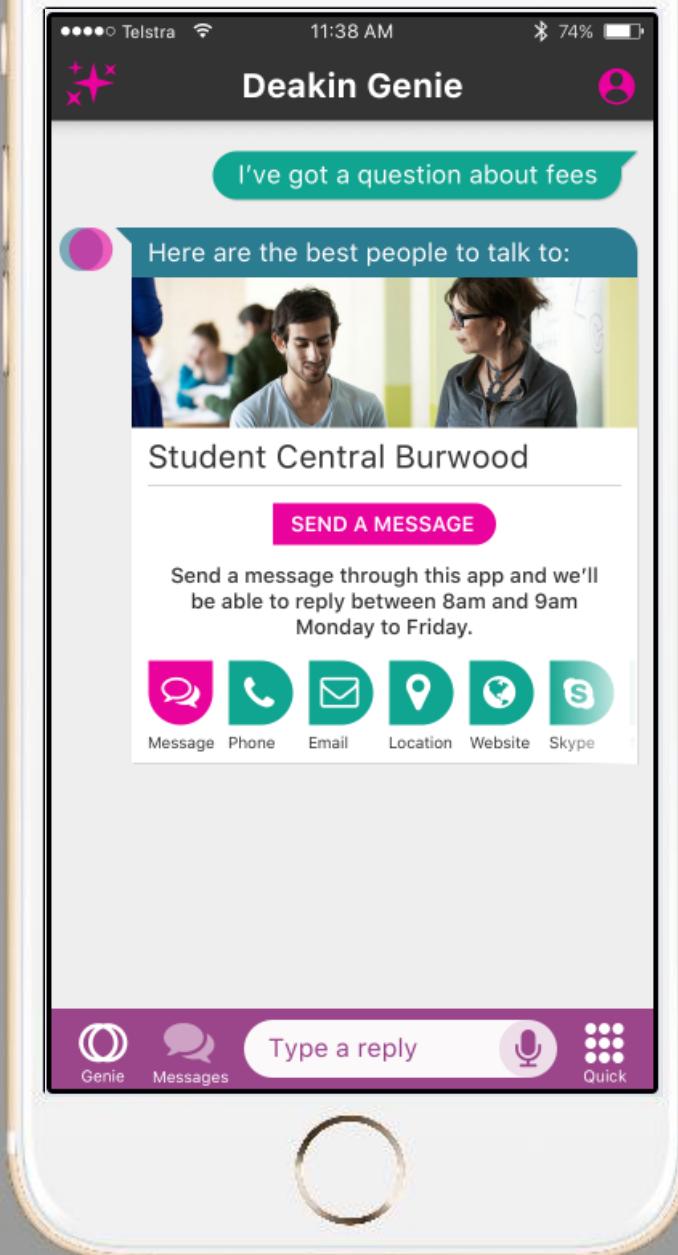
Planning O-Week



Personalised Tasks

# CHAT AND MESSAGING

Recognising the limits of AI and facilitating conversations with the right support staff



Connecting People  
Messages within Deakin



Peer-to-peer  
conversations



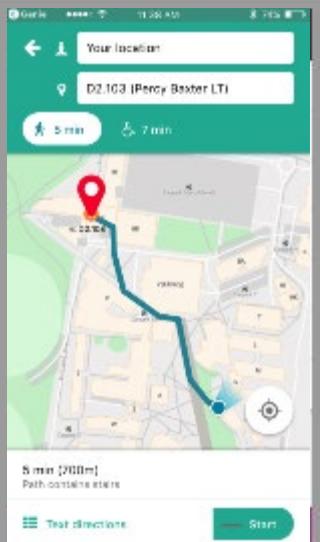
Integrated  
staff support



Mentor support

Messaging with  
peers and staff

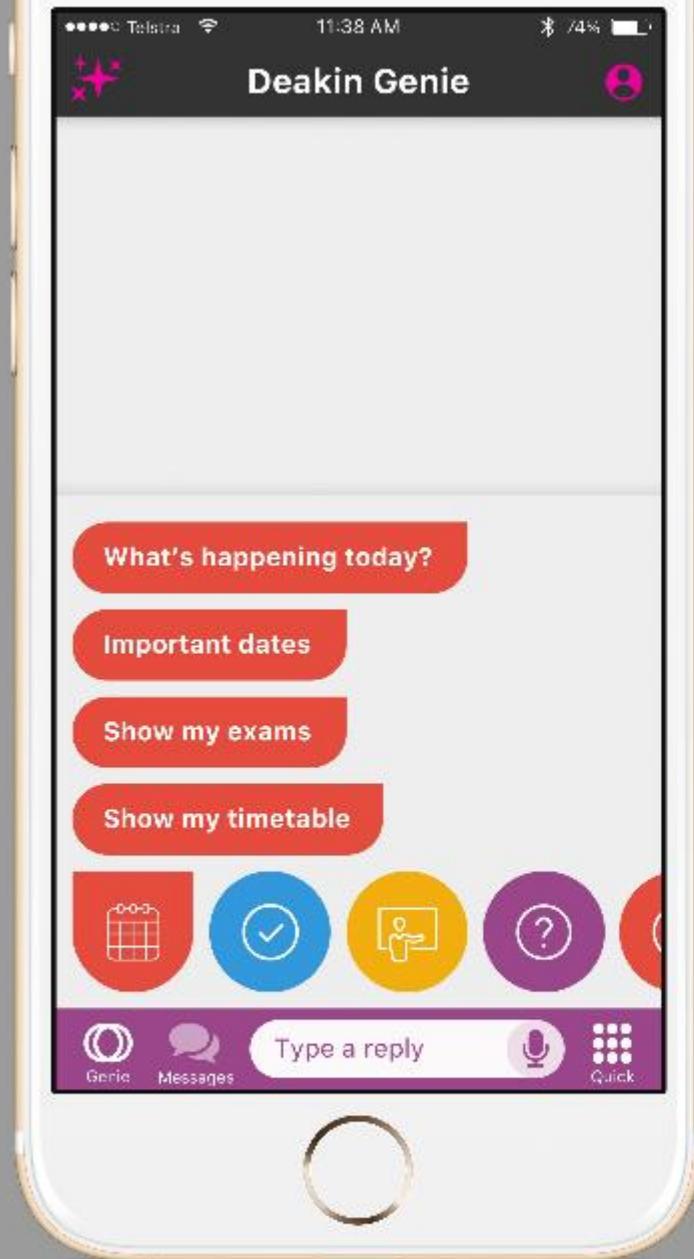
AI-Human  
support



Clear links to  
wayfinding

## QUICK ASK

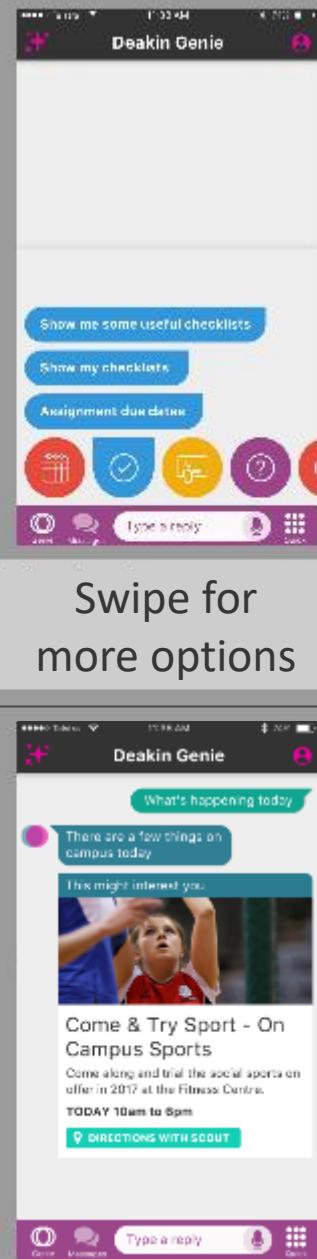
Prompting discovery of high value services



What can I ask Genie?  
Suggestions and shortcuts.



Shortcuts to popular questions



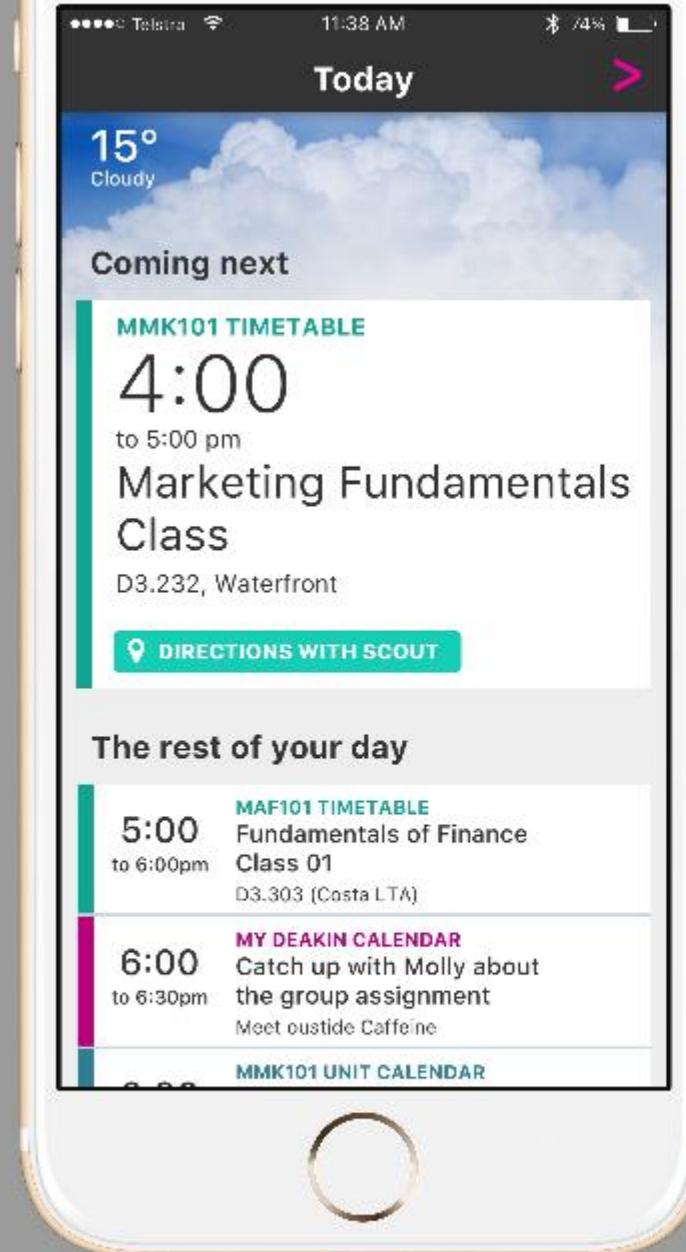
Swipe for more options



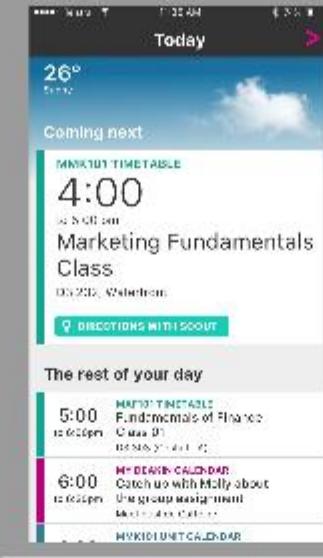
Predictive suggestions

# SMART BRIEFING

Making personal organisation and time management straightforward



Swipe for an actionable briefing  
Smart personal assistance



My day at  
a glance



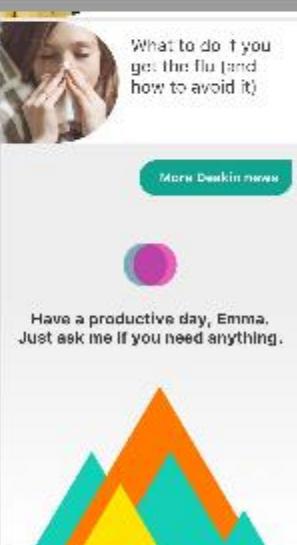
My checklists  
and tasks



Latest unit news



Assignment  
due dates



Targeted news

Supportive and  
motivating

# CHECKLISTS AND TASKS

Reducing anxiety and overload about what needs to be done



Things to do and help doing them  
Short checklists linked to Genie help



Recommended checklists & tasks



Checklist previews



Class News

Task details link to support

A sense of completion

## FAST, INTUITIVE AND USABLE

*“It's easy to understand”*

*“It's very efficient”*

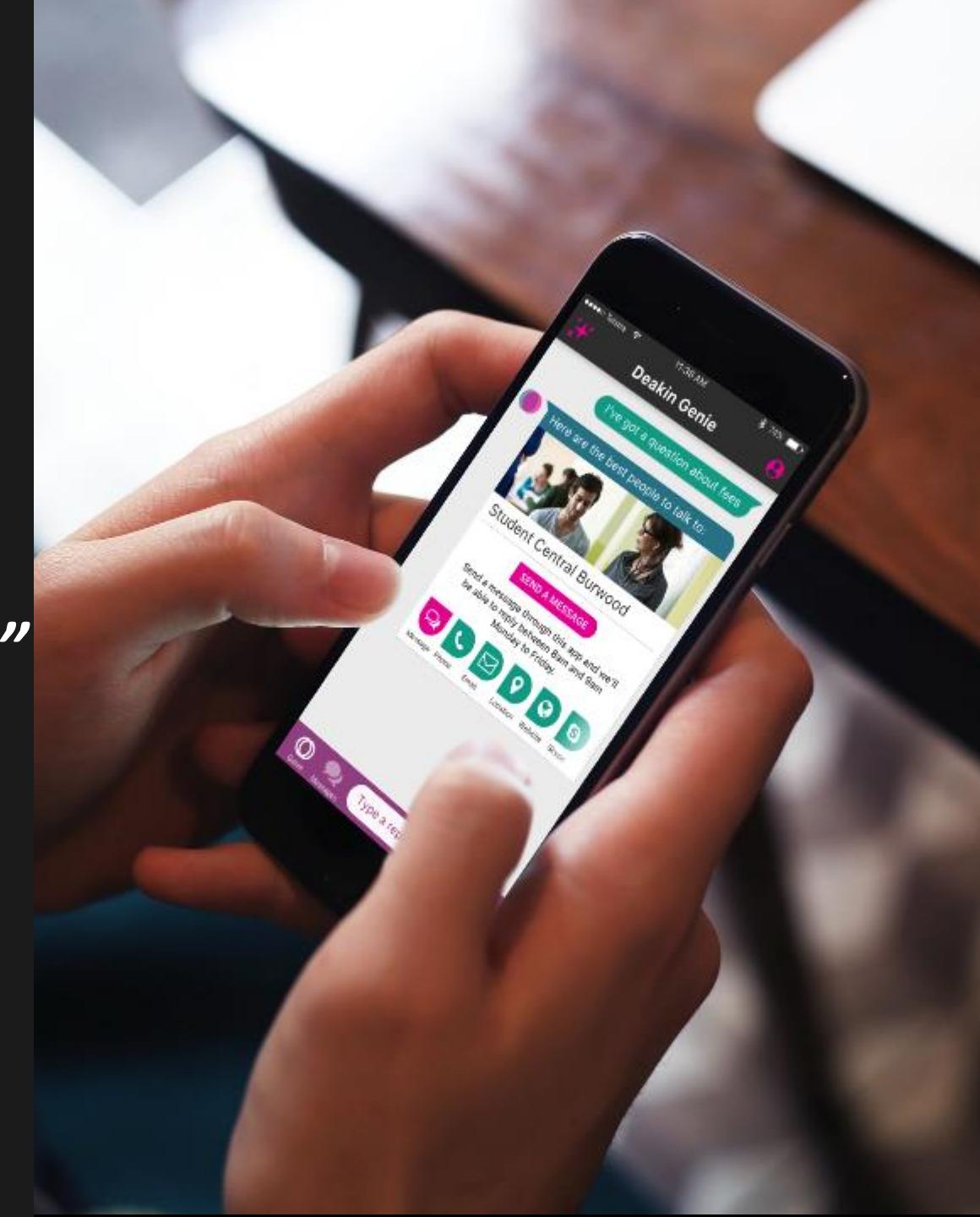
*“That's so much easier”*

*“It's simple, it's easy to use”*

*“That's smart - that's good, that's easy”*

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Sending messages has become a natural, learned behaviour on mobile: the user interface and interaction model is easy to use and feels simple to users.

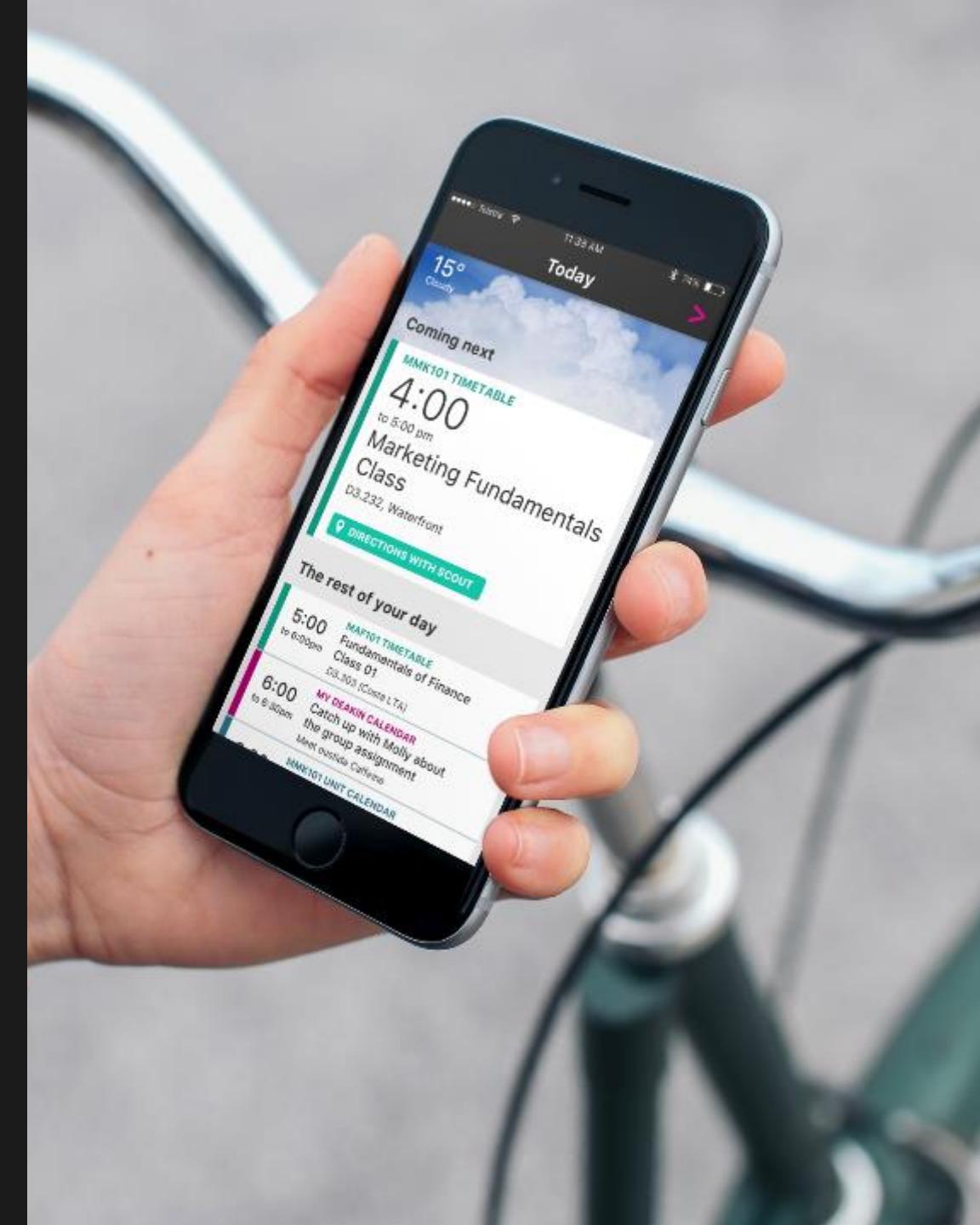


# CONVERSATIONAL USER INTERFACE

*“It’s like having Siri, but a Siri  
that organises your life”*

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The conversational interface immediately resonates with users, who find this form of interaction natural and intuitive.

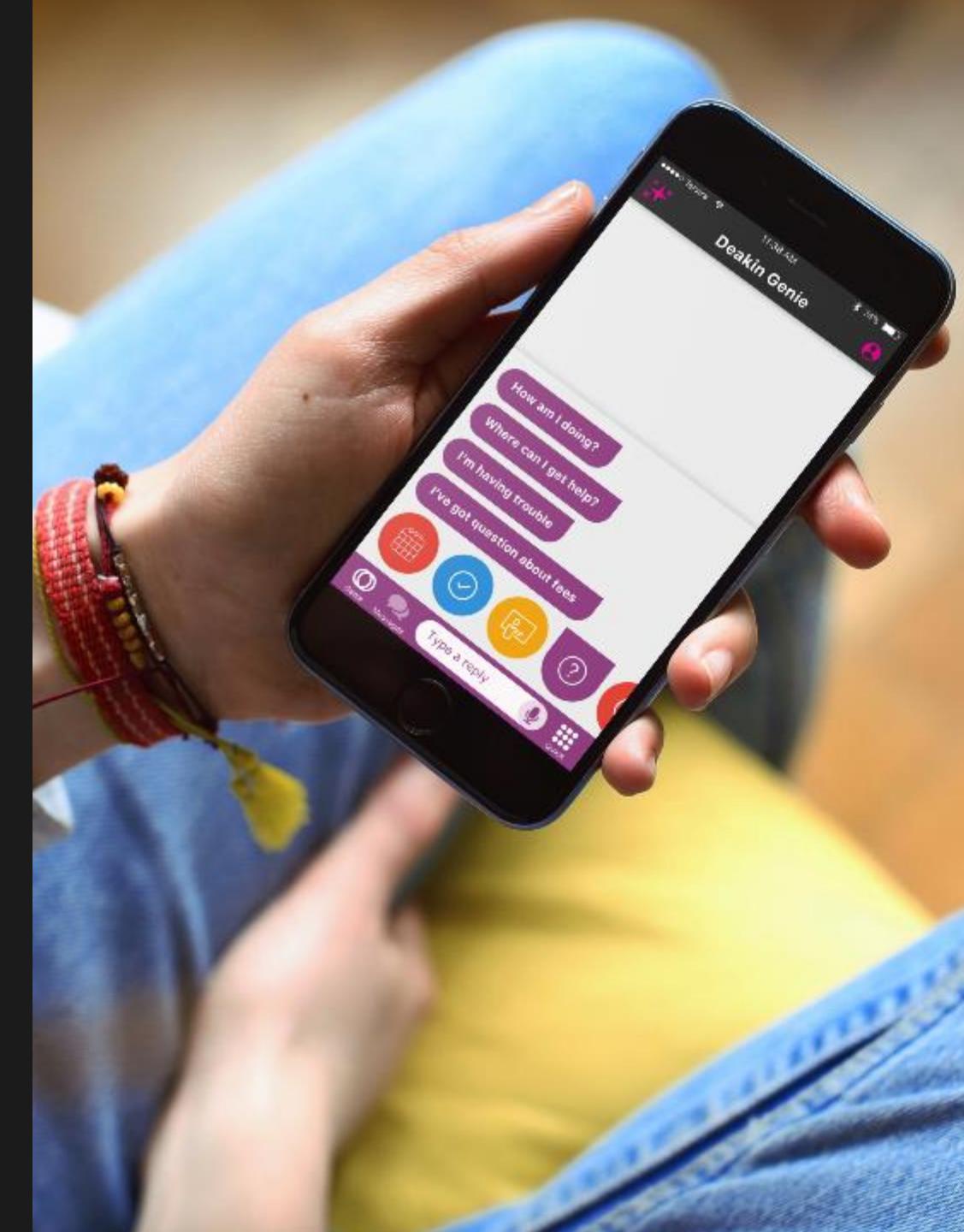


## INFORMATION DISCOVERY

*“It’s given me information  
that I didn’t even know  
about, so it’s really useful”*

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Genie uncovers organisational information, support services and resources (physical and human), at the time when it is most useful.

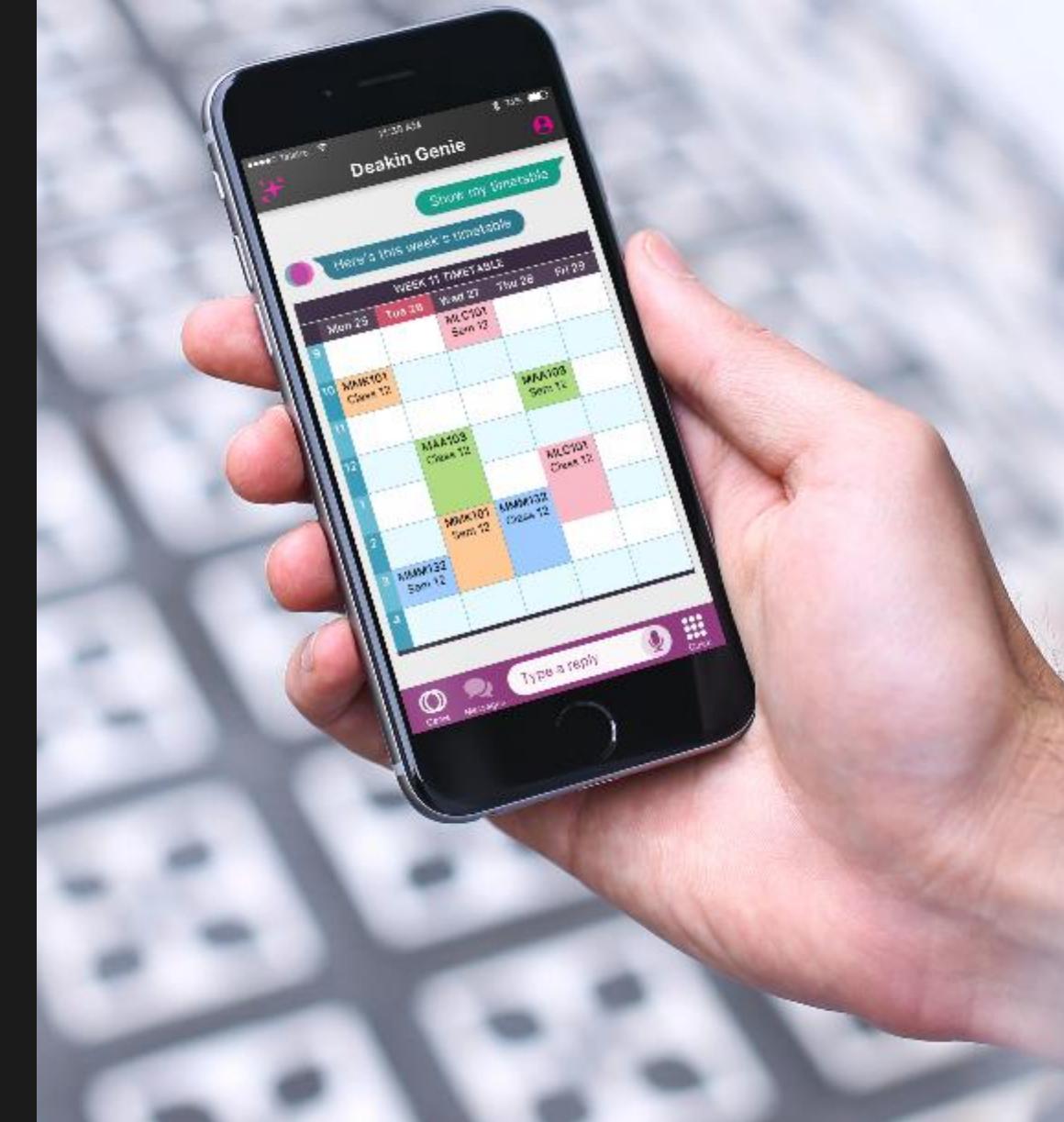


## MOBILE OPTIMISATION

*"I like that it just comes up: I don't have to click on something - it's just there"*

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Three steps on a computer can feel like ten on mobile.  
Users are impressed by the directness and ease with which they can summon resources, tools and information.



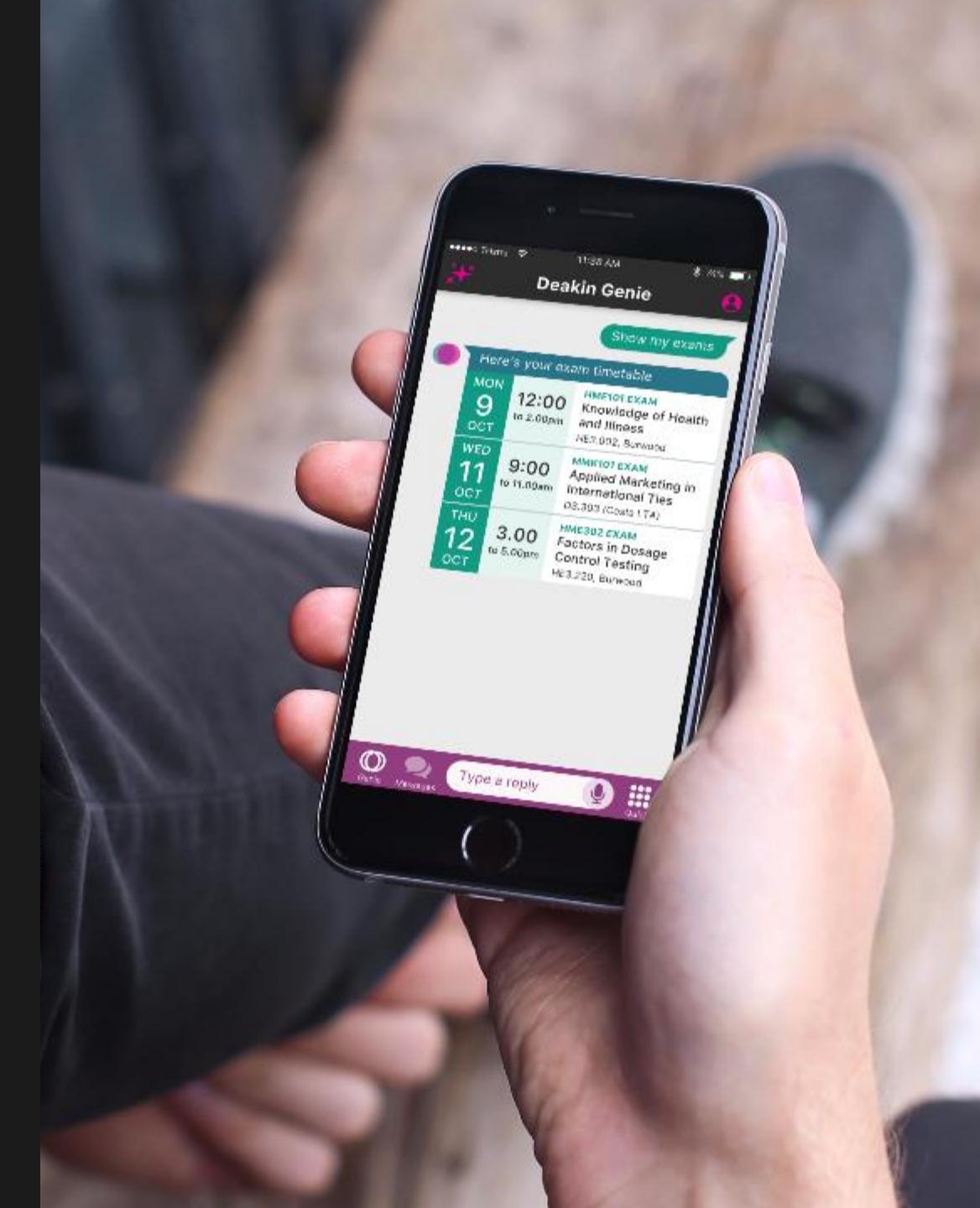
## CLARITY AND SIMPLICITY

*“It has less information which is nicer – it’s not clouded by too much information”*

*“That’s so good! It’s clear and simple”*

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Genie provides **brevity**, **consistency** and **clarity** when delivering information. This is extremely well-received by users.



# How does Genie work?

## Level 1 – Genie conversations

- Handcrafted, personalised responses to common requests
- Rich with conversational elements, media and microservices

## Level 2 – Genie Q&A

- AI-curated answers sourced from our web and knowledge bases
- Answers reference a student's context to ensure relevancy

## Level 3 – Human support

- Genie offers contextualised handovers to staff for support

# Genie conversation builder

Deakin Admin Central PALS GENIE

Logged in as John Smith Help Settings Log out

Dashboard Messages Intents Conversations Style Guide Developer Tools Testing Area

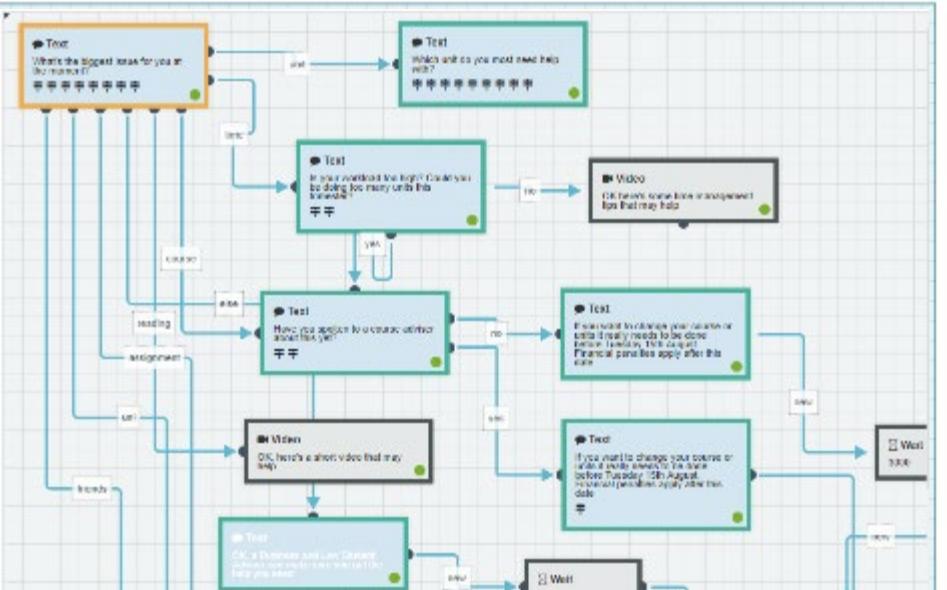
Conversations > Untitled conversation

## How are you settling in to study?

All changes saved  Conversation settings

Text and images Calendars CloudDeakin Library Courses

TEXT IMAGE VIDEO LINK



Message Inspector Hide

Content Responses Configure

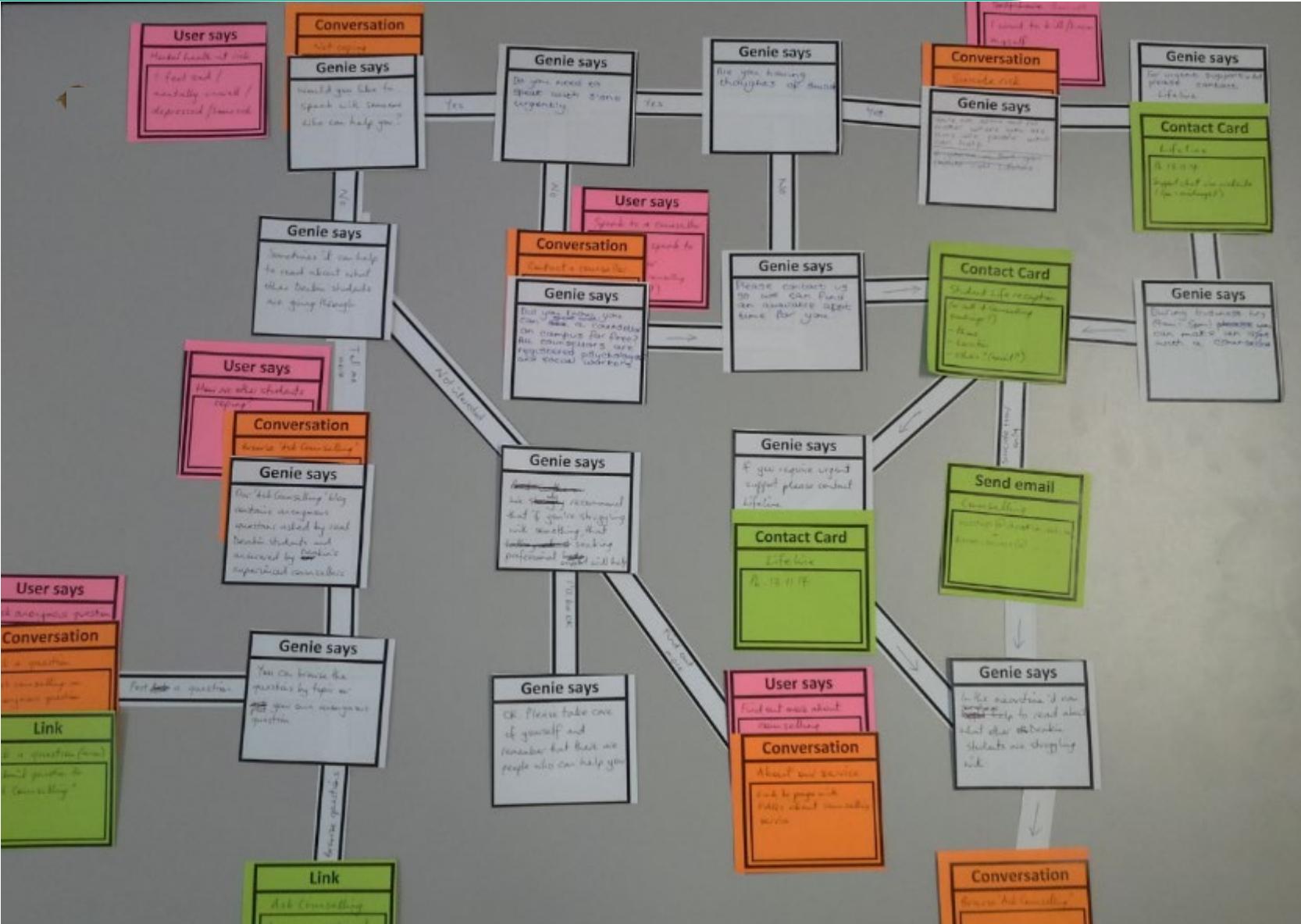
Message

You might find this useful if you're thinking  
You might find this useful if you're thinking  
about changing units

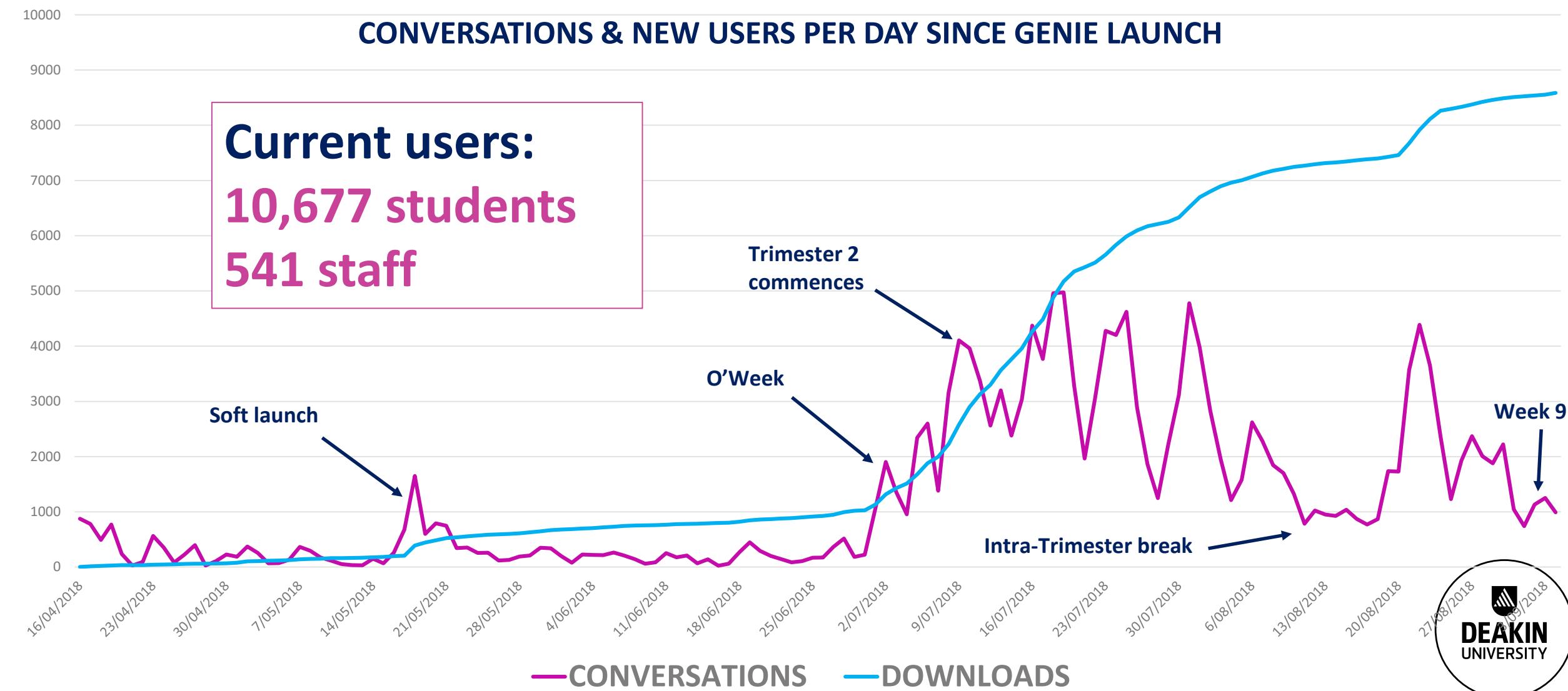
Video URL

Video Title

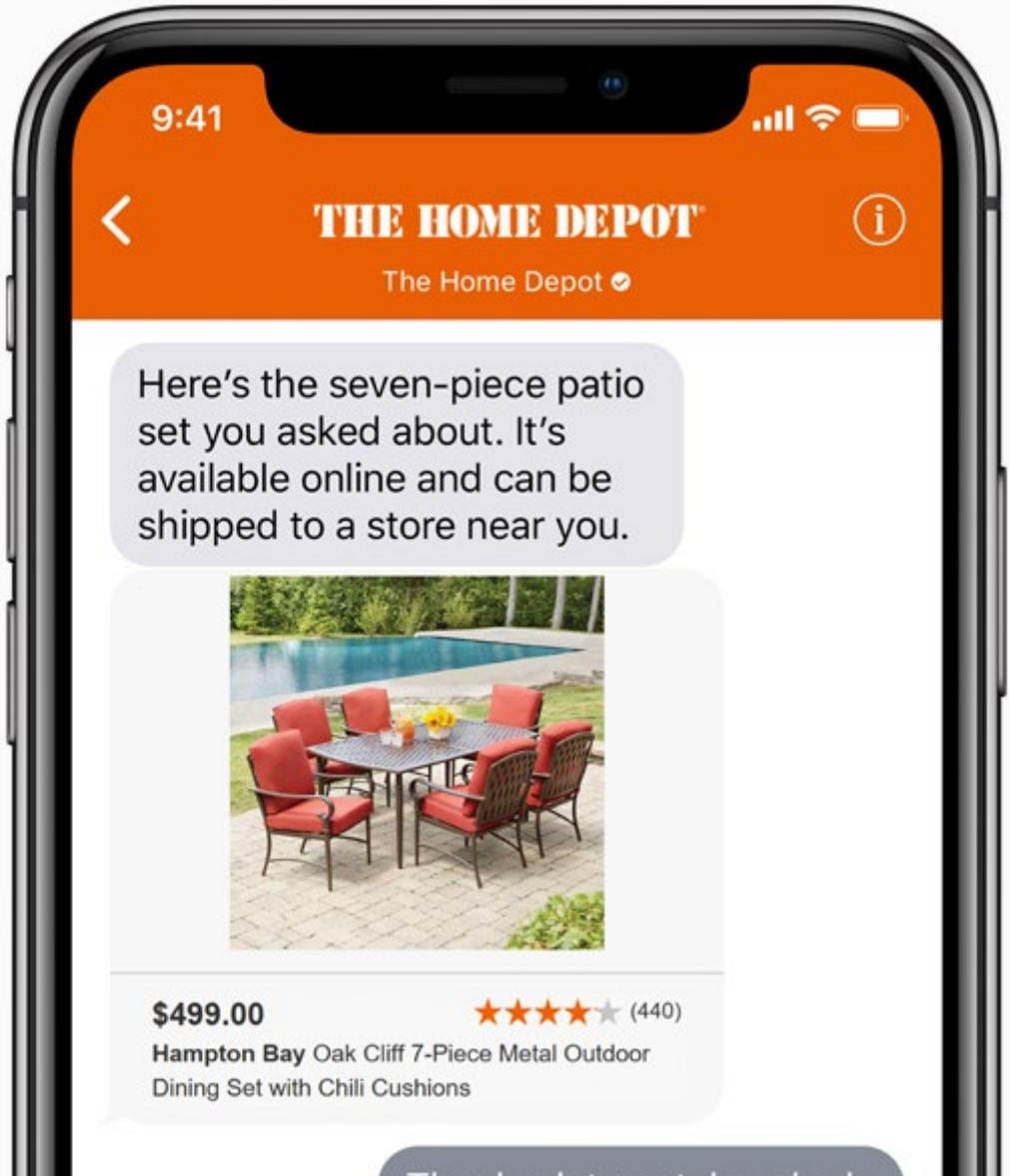
# Modelling conversations



# Genie uptake and usage



# Conversational commerce



## Business Chat

# A whole new way to talk to companies.

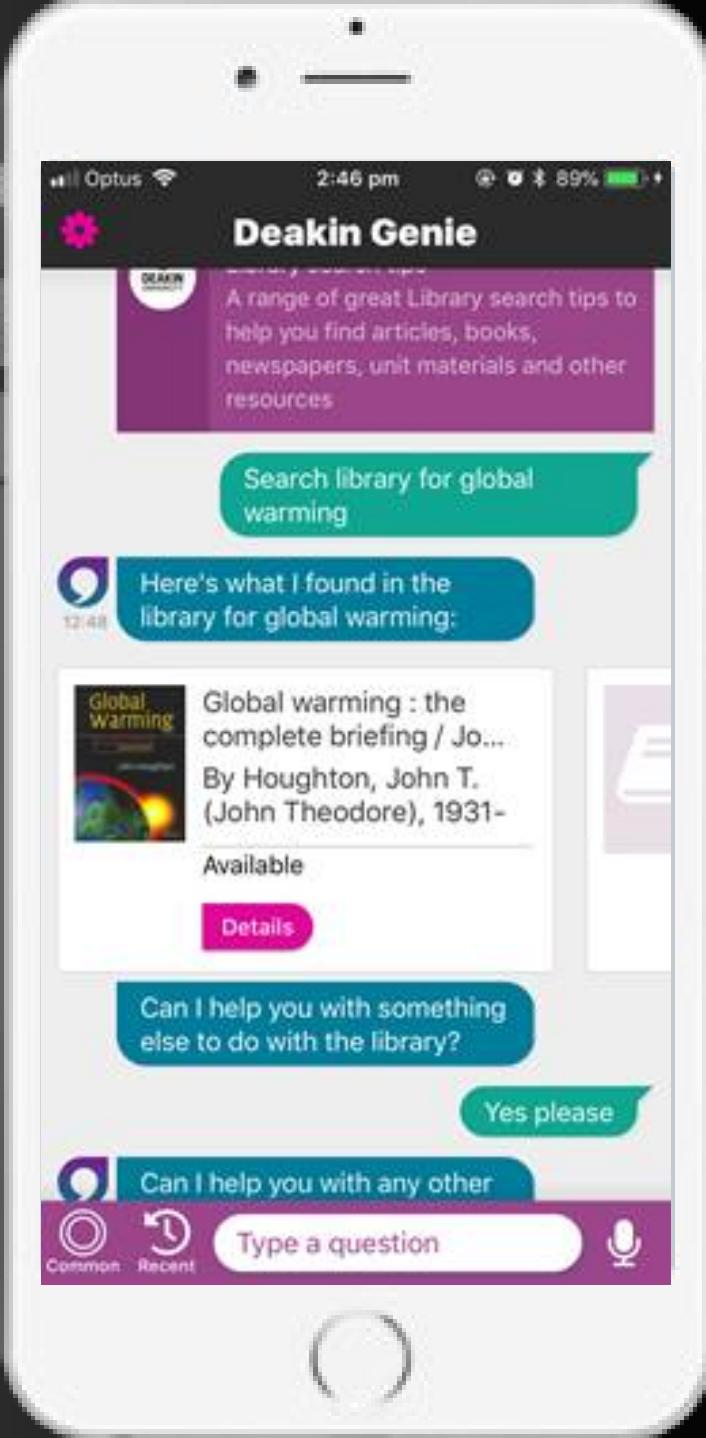
Now you can ask for information, schedule appointments, and even make purchases right in Messages on your iPhone or iPad. Which makes connecting with your favorite companies as easy as texting your favorite people.

# Genie as a commercial product

In 2019 we're partnering with alpha customers in

- Financial services
- Health
- Government





# Library and Genie: evolution, not revolution



## Q1 2017

- Early project interactions

## Q2 – Q3 2018

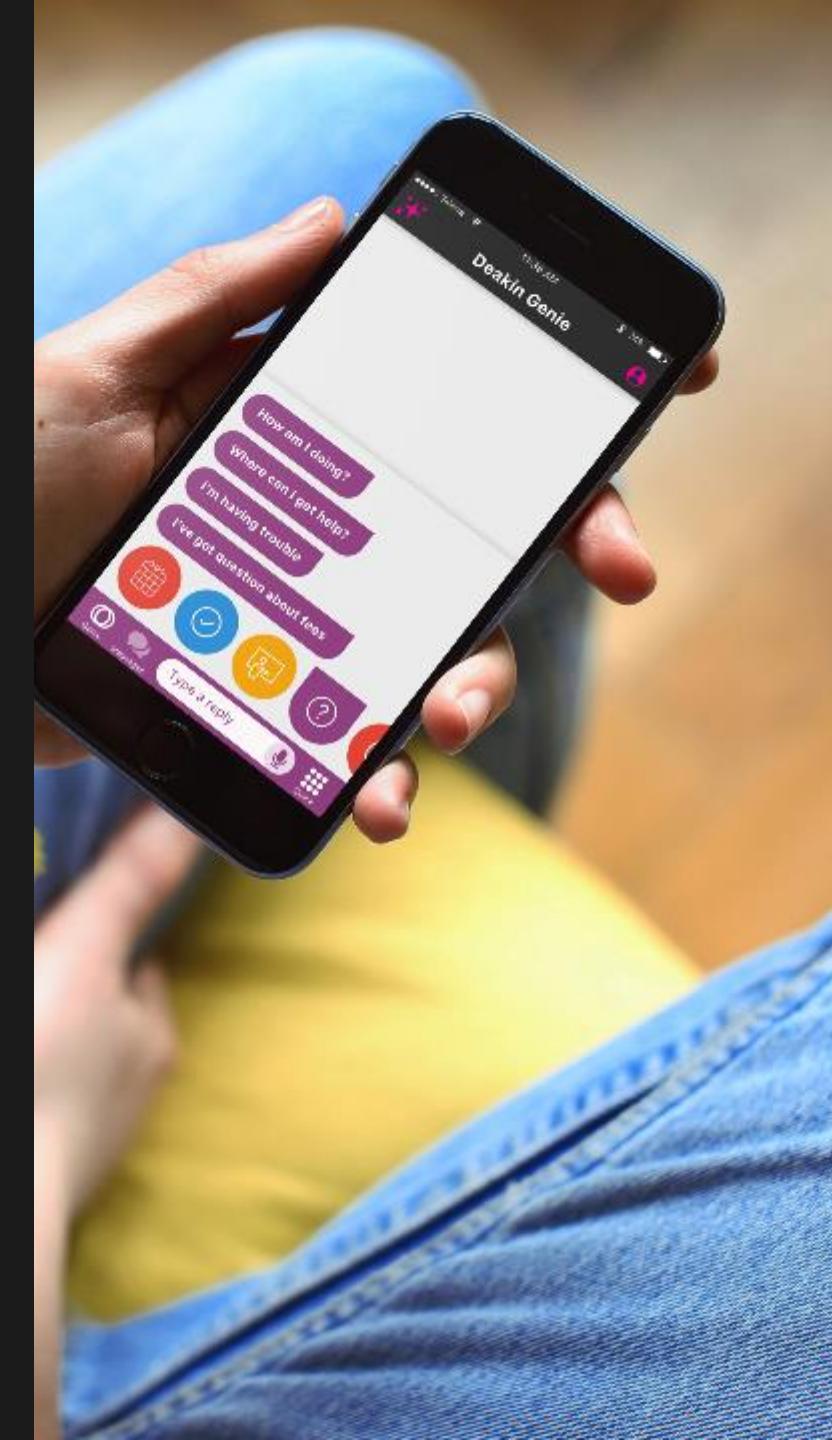
- UAT and 1<sup>st</sup> release

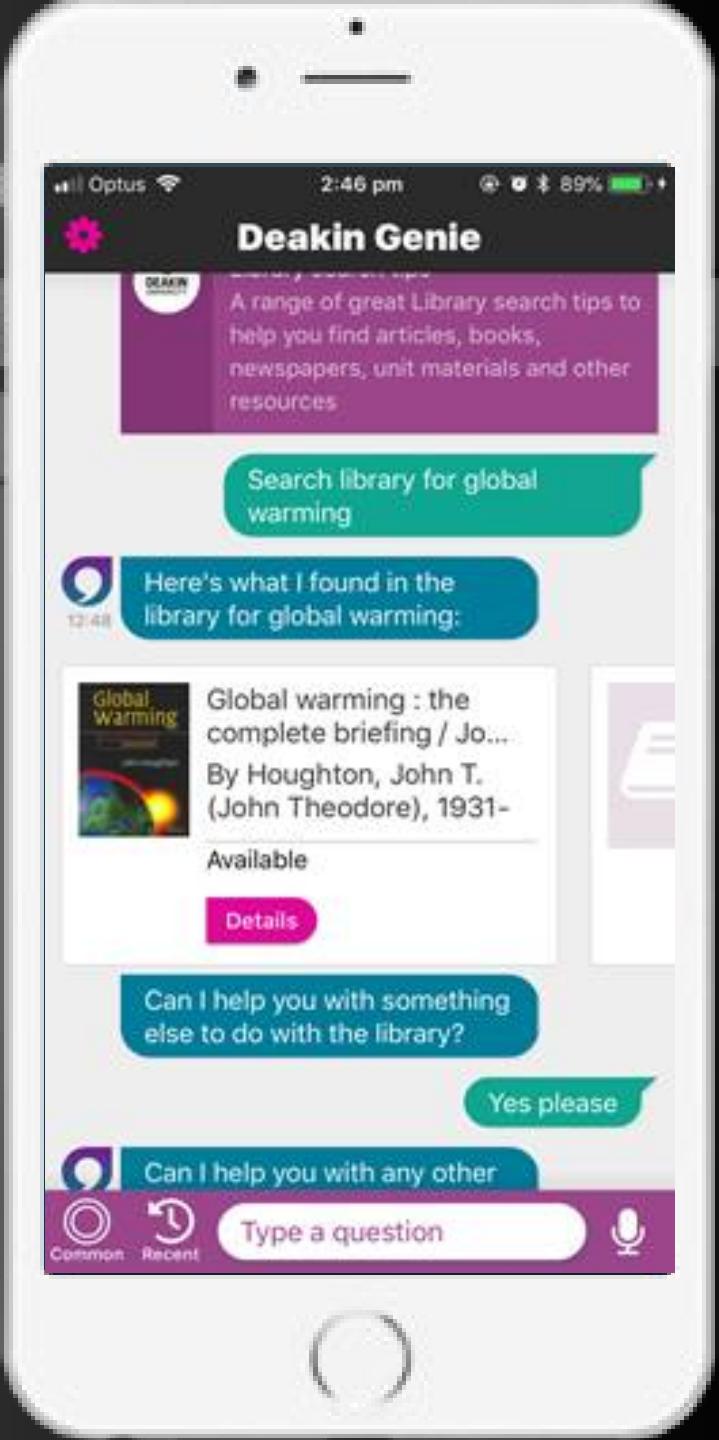
## Q4 2018 – Q1 2019

- Reading lists

## Q2 2019 and beyond

- Current usage, iterative improvement, operationalisation and future-gazing

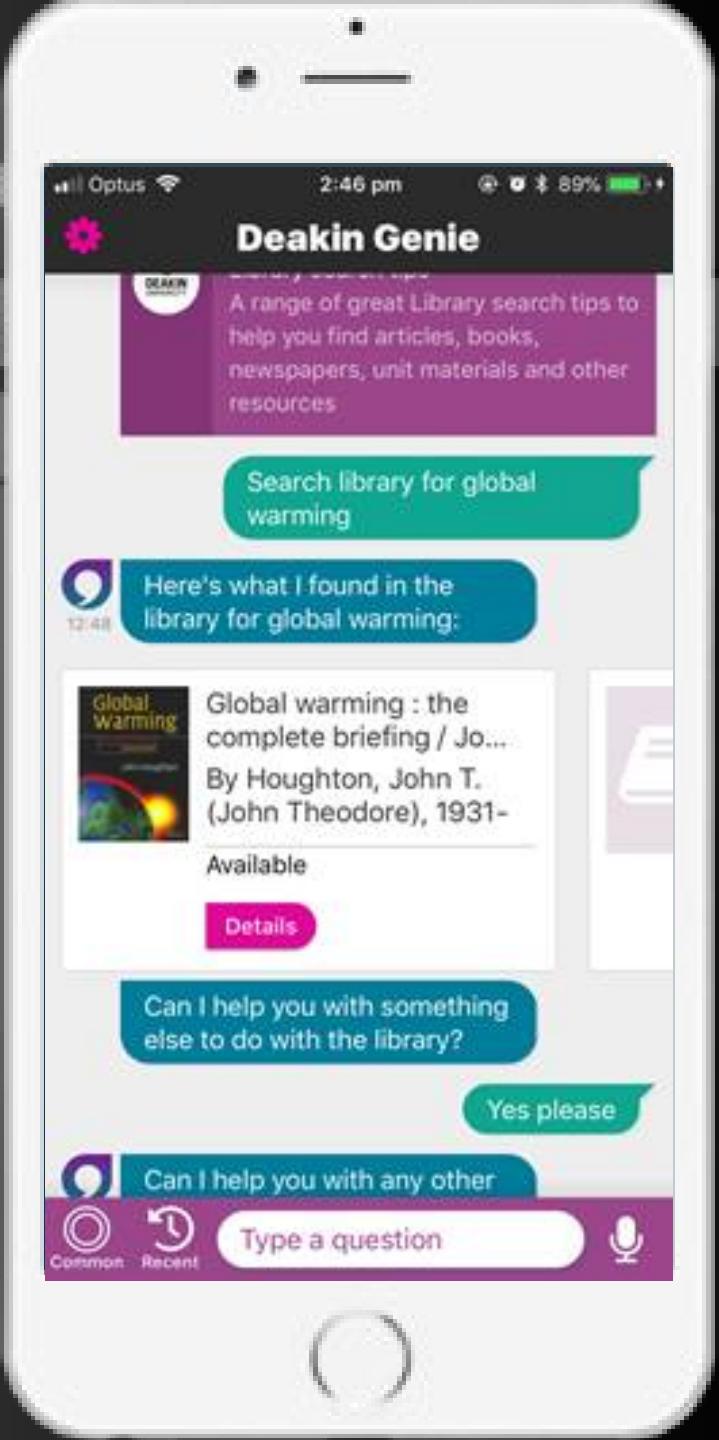




## Early project interactions

- Holds
- Loans
- Search

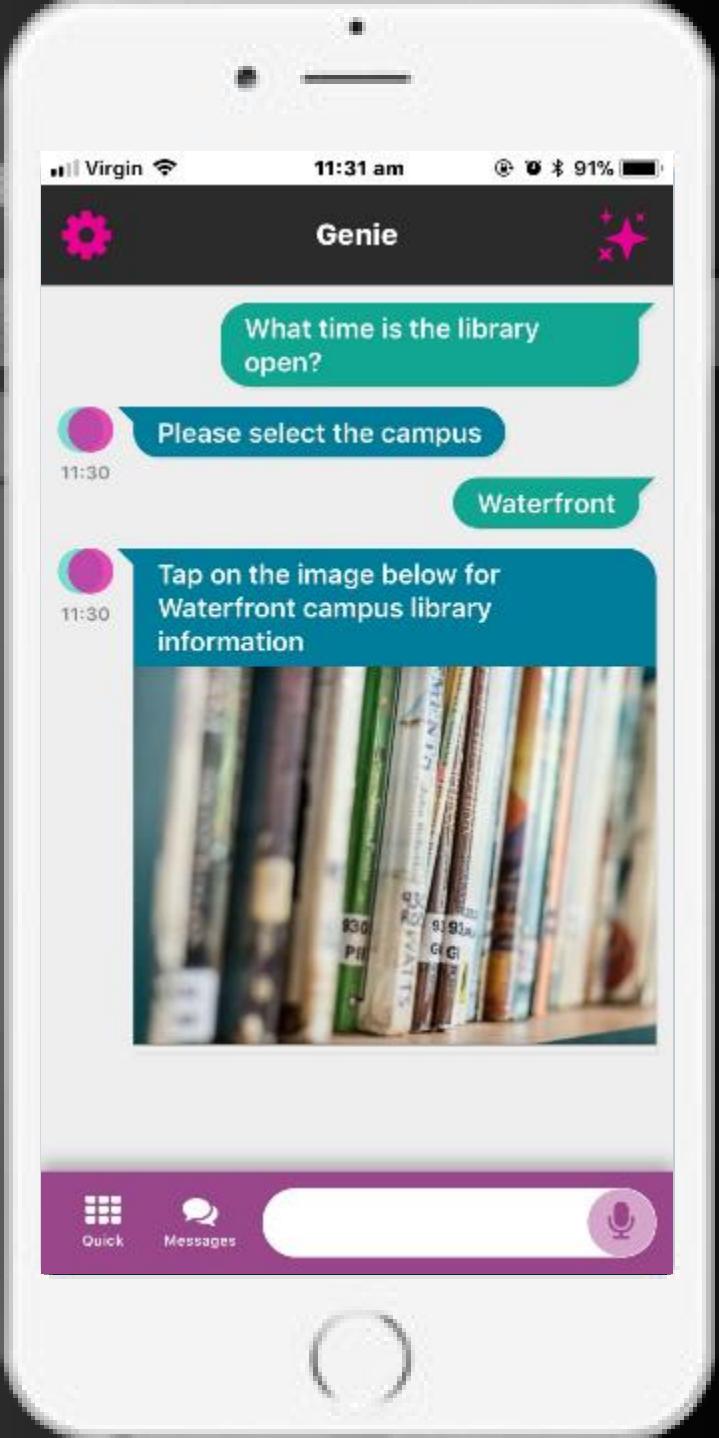




## UAT and 1<sup>st</sup> release

- Conversations
- Integrations





## Library conversations

- Conversation uplift
- ....using online chat logs
- ....to understand *what* students wanted and *how* they asked for it



# EXISTING CONVERSATION UPLIFT

How do I contact the library?

Who is my liaison librarian?

How do I write a literature review?

Can I borrow from another library?

What is Endnote?

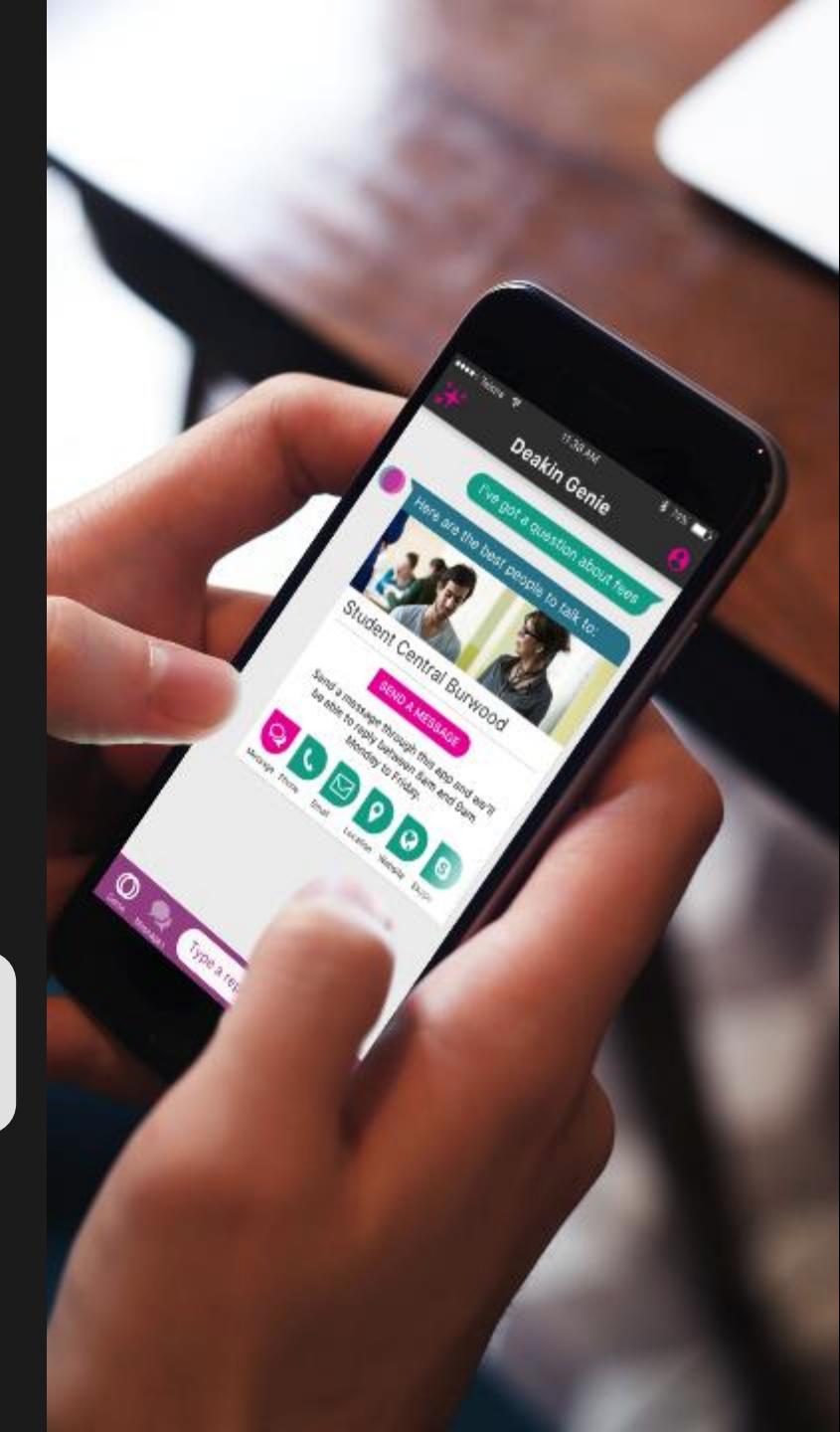
How do I access full-text articles in Google Scholar?

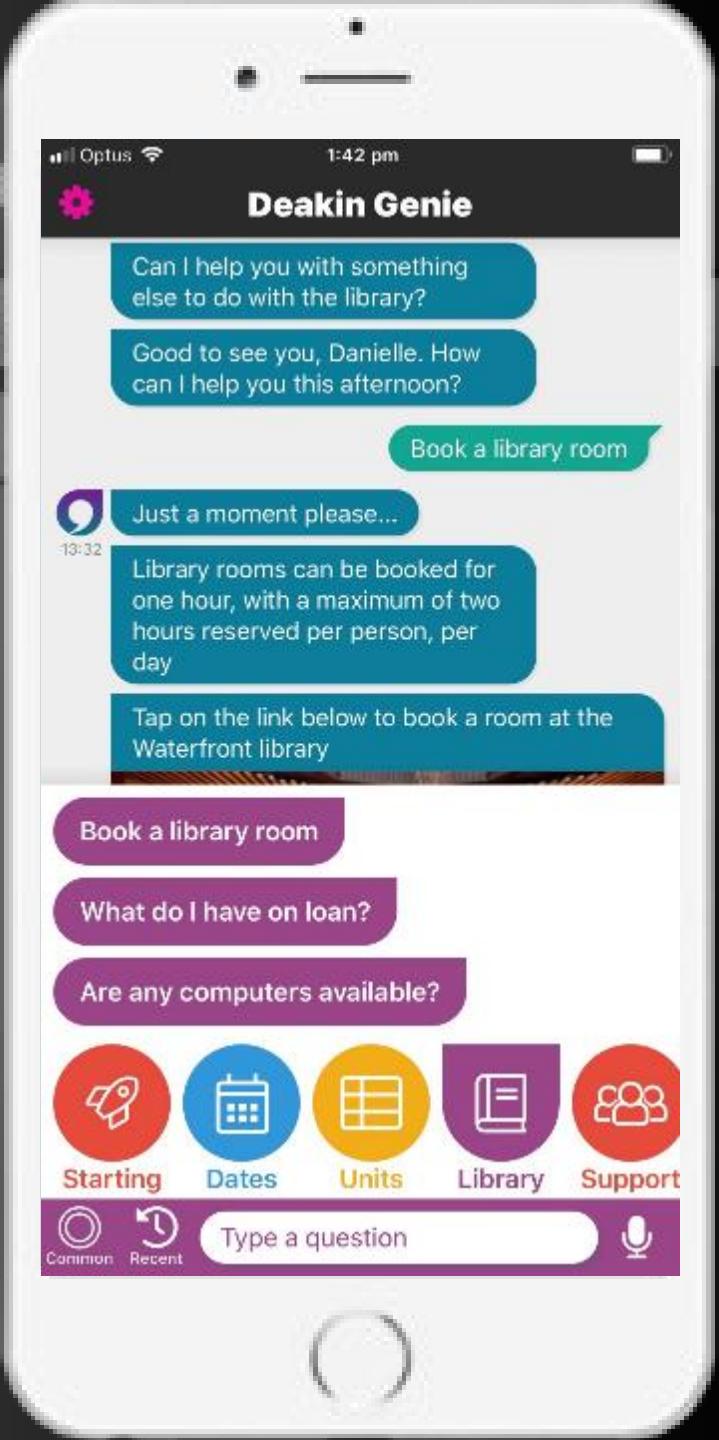
Why can't I access any databases?

I've lost my library card

Is Burwood campus library open today?

Do you deliver books?

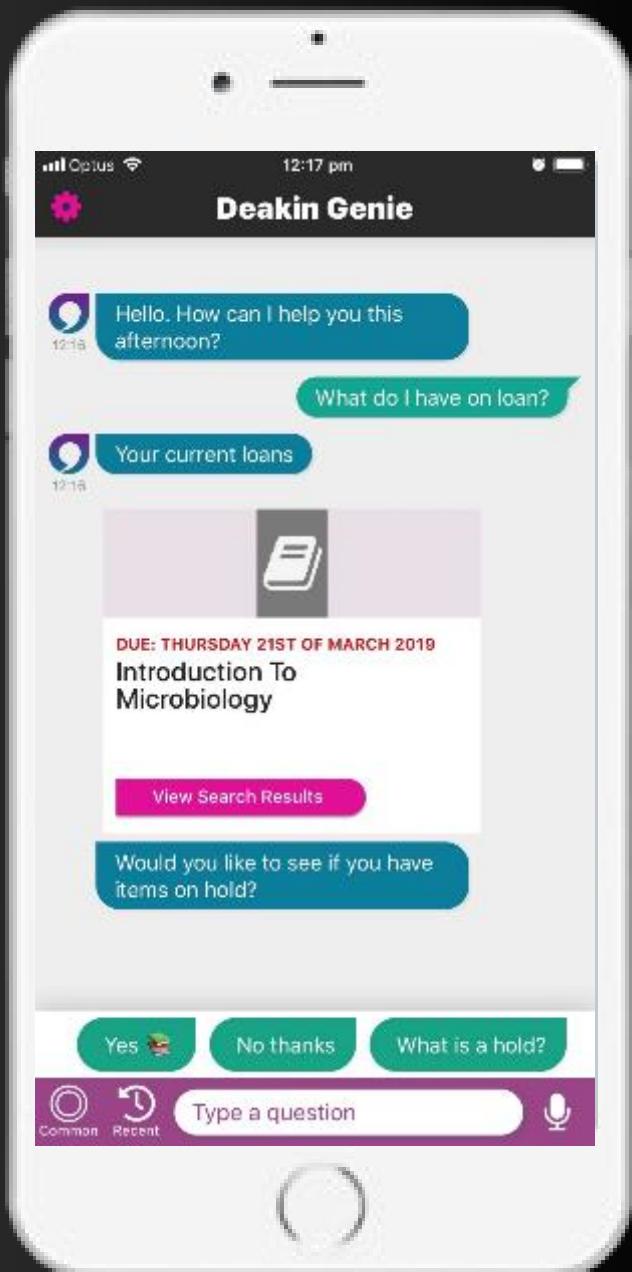




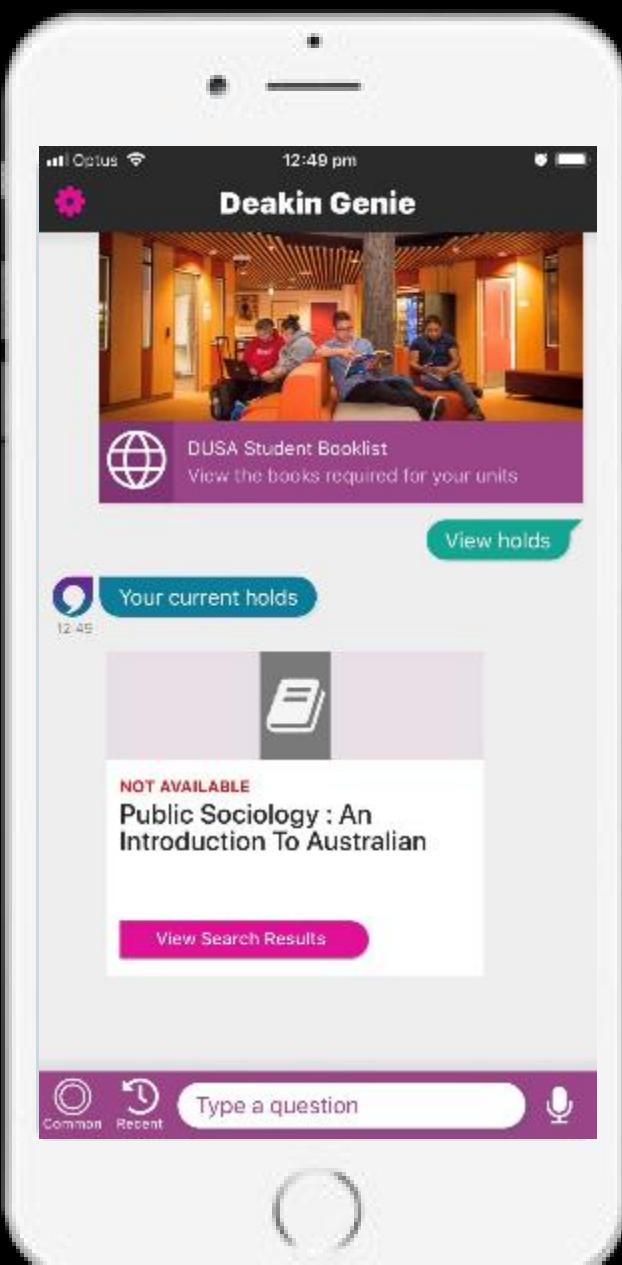
Most people use common triggers to initiate a conversation

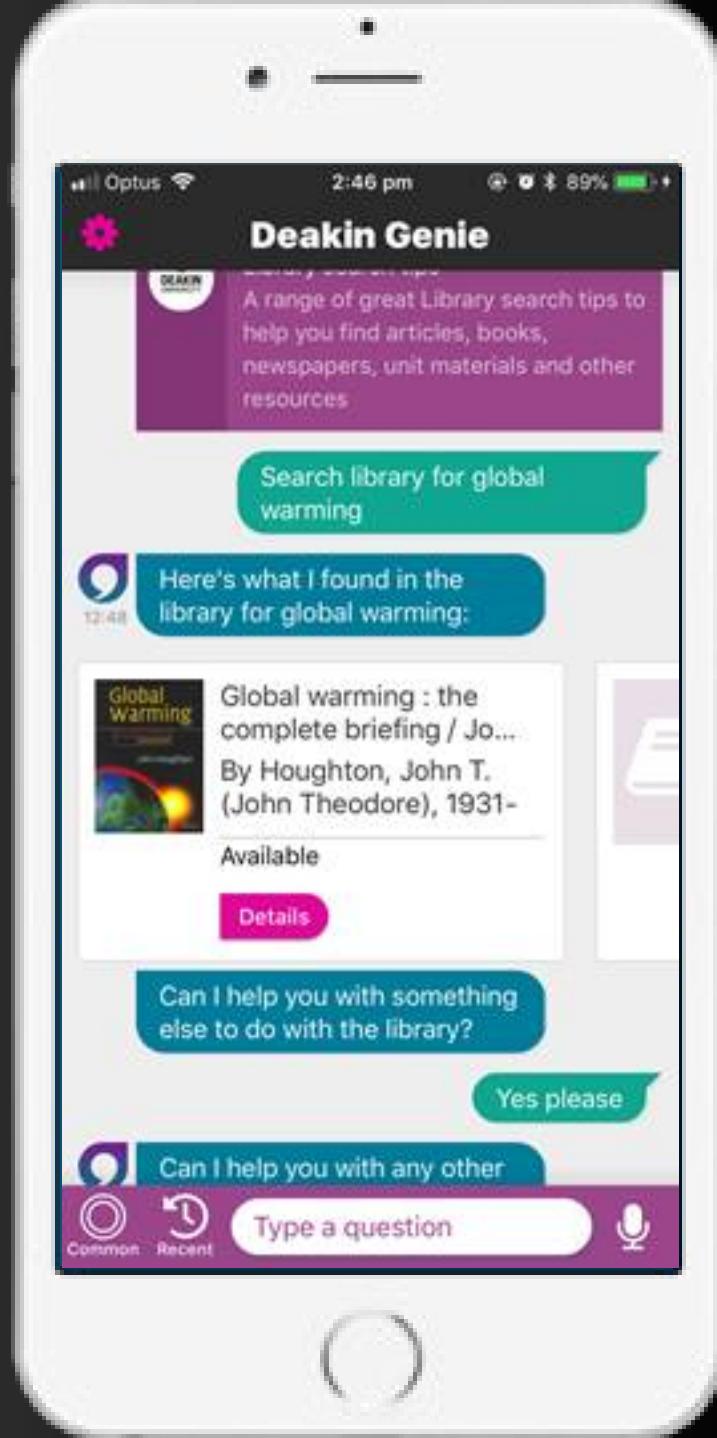


# Loans



# Holds

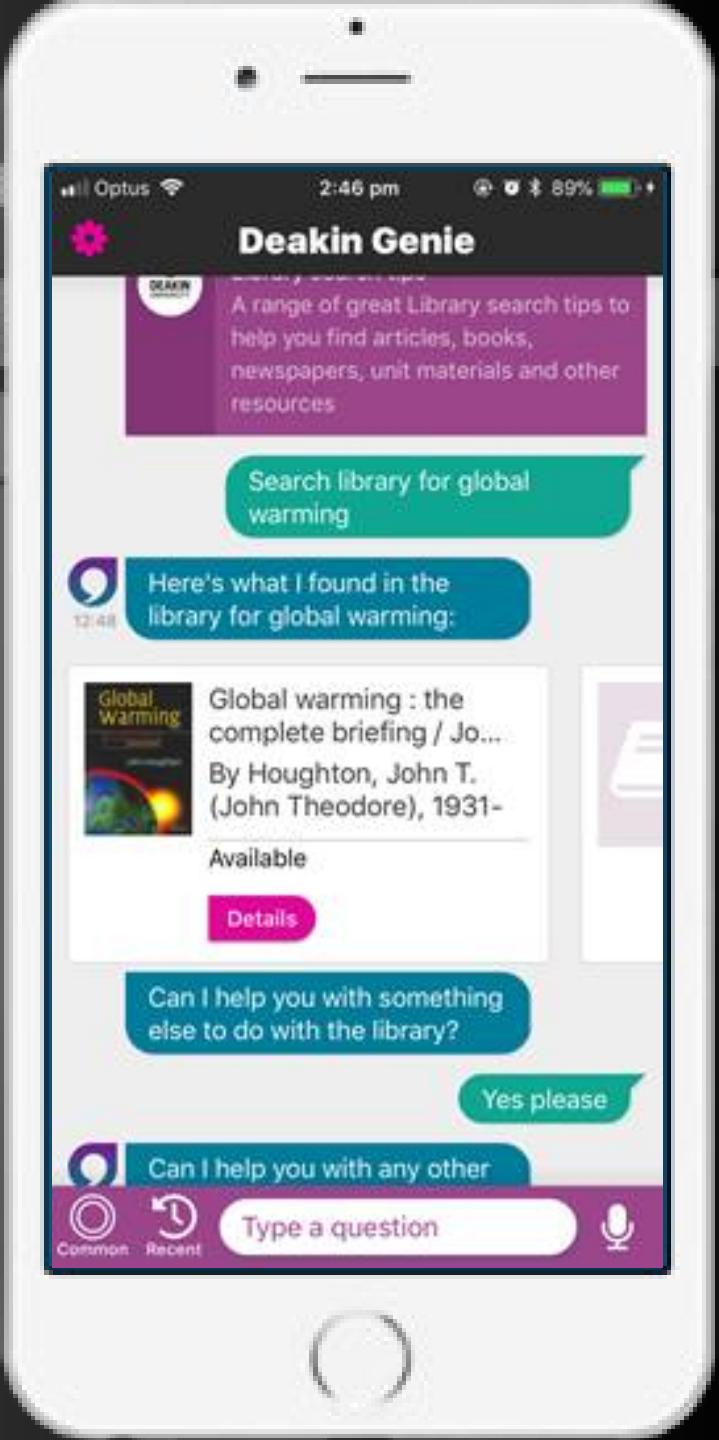




## Library search

- Conversation
- Integration





The original Genie interface attempted to simplify the search experience for students, but in doing so risked *oversimplifying* the search process.

This was not only unhelpful, but at odds with our role in championing the growth of digitally literate, search-confident students.



# Managing expectation through conversation



# How do I search the library?

## Original

I can help you with quick searches of the library.

Just ask me "search the library for...." and then the term you'd like to search for.

For example, "search the library for global warming"

## Current

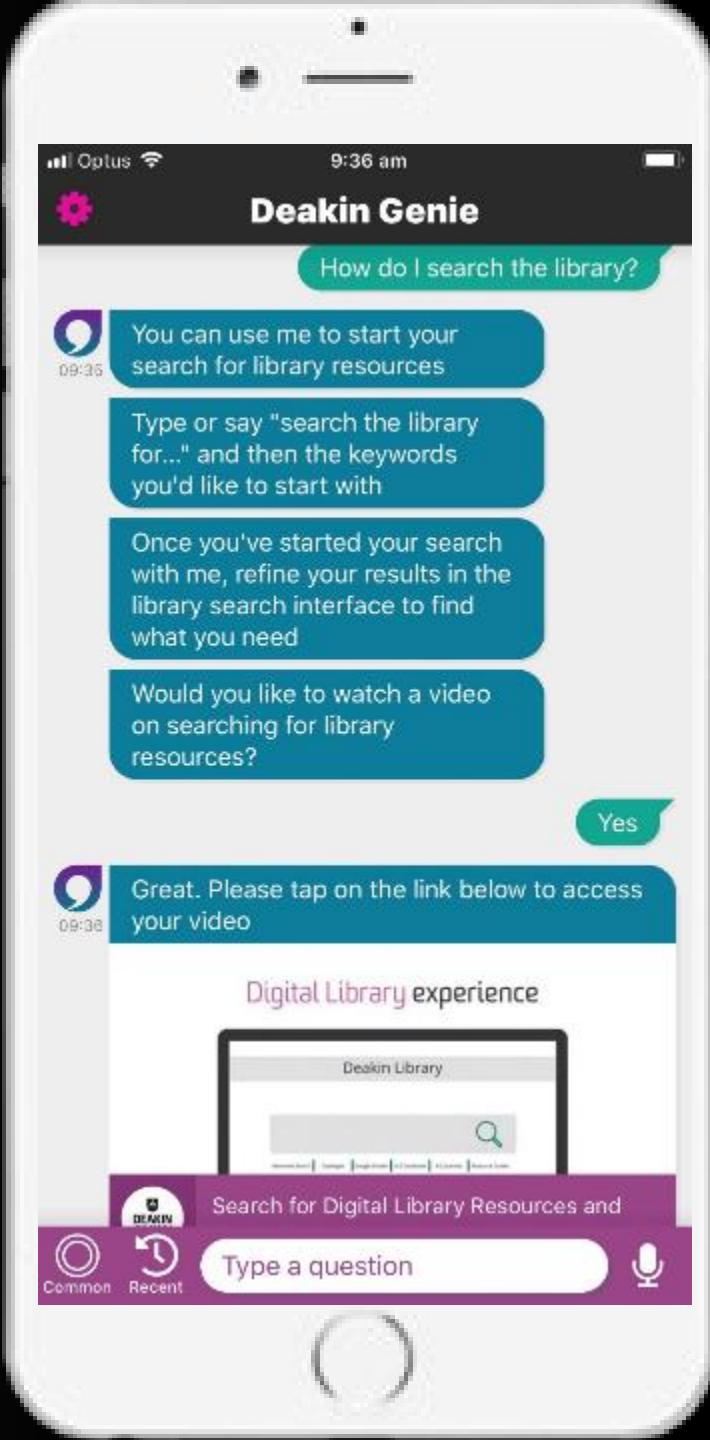
You can use me to start your search for library resources.

Type or say "search the library for..." and then the keywords you'd like to start with.

Once you've started your search with me, refine your results in the library search interface to find what you need.

Would you like to watch a video on searching for library resources?





# Search the library for

Original

Search the library for global warming

Here's what I found in the library for  
global warming.....

Result 1

Click placard  
to view record  
in EDS

Result 2

Click placard  
to view record  
in EDS

You see can  
full results at  
the library  
website

Can I help you with something else to do  
with the library?

Current

Search the library for global warming

Here's what I found in the library for  
global warming.....

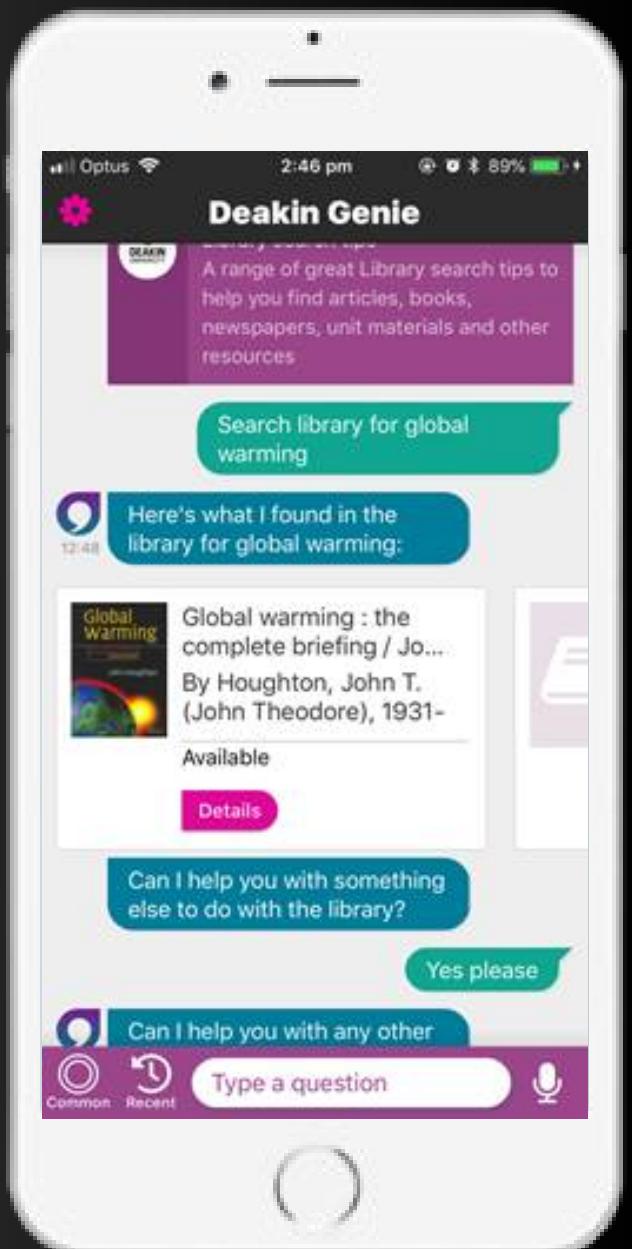
Results link

Click placard to view results list in EDS

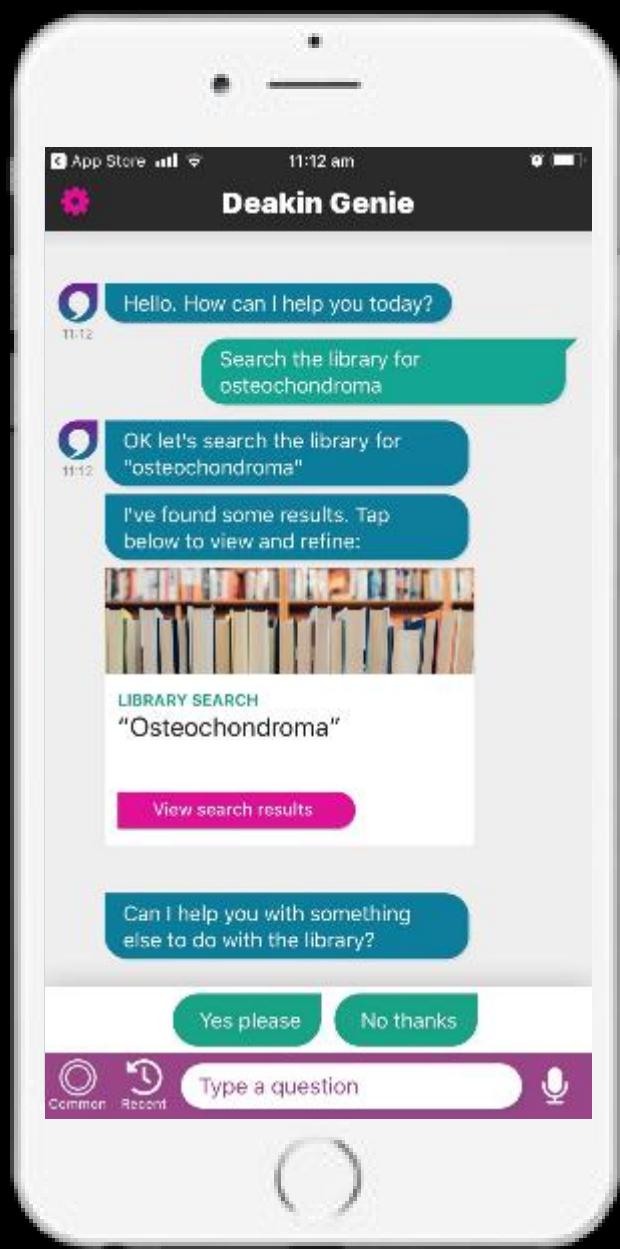
Can I help you with any other library  
services?

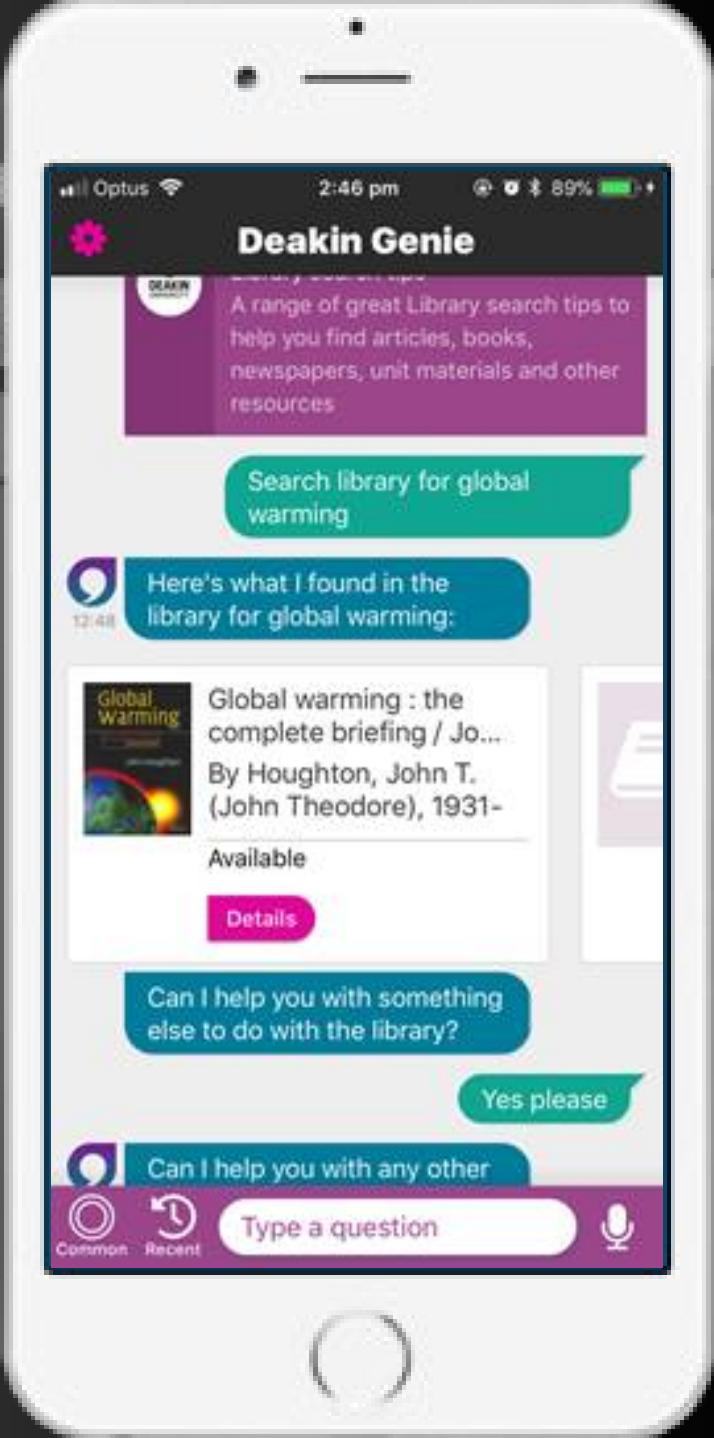


# Original



# Current

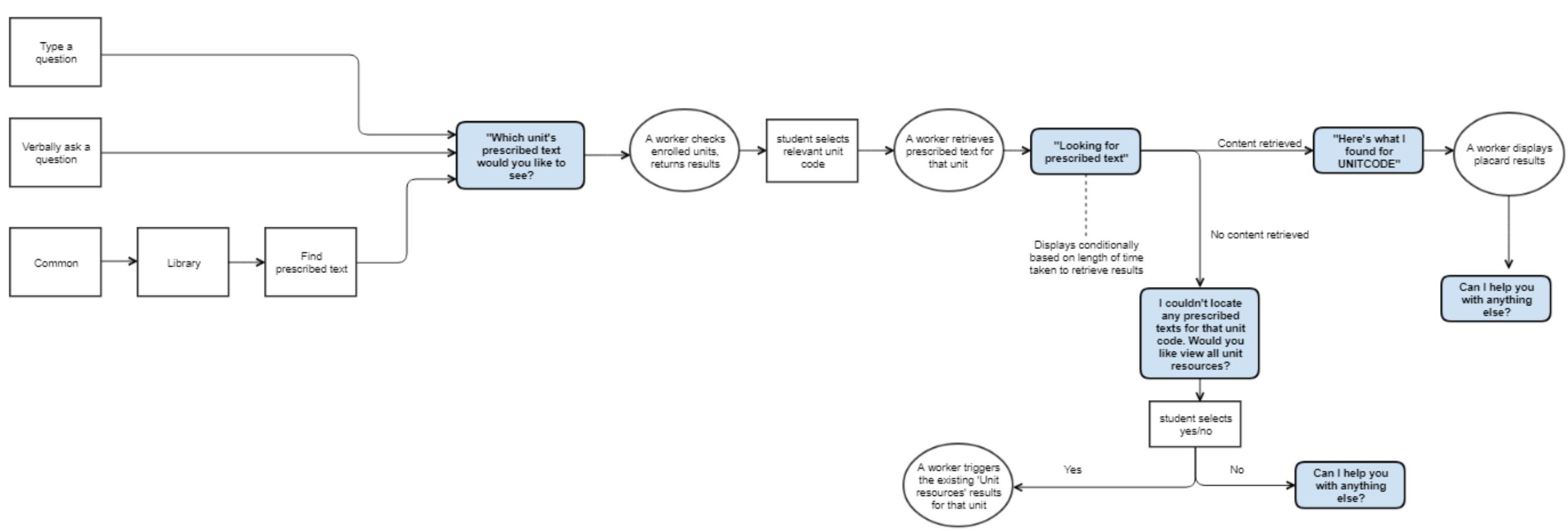




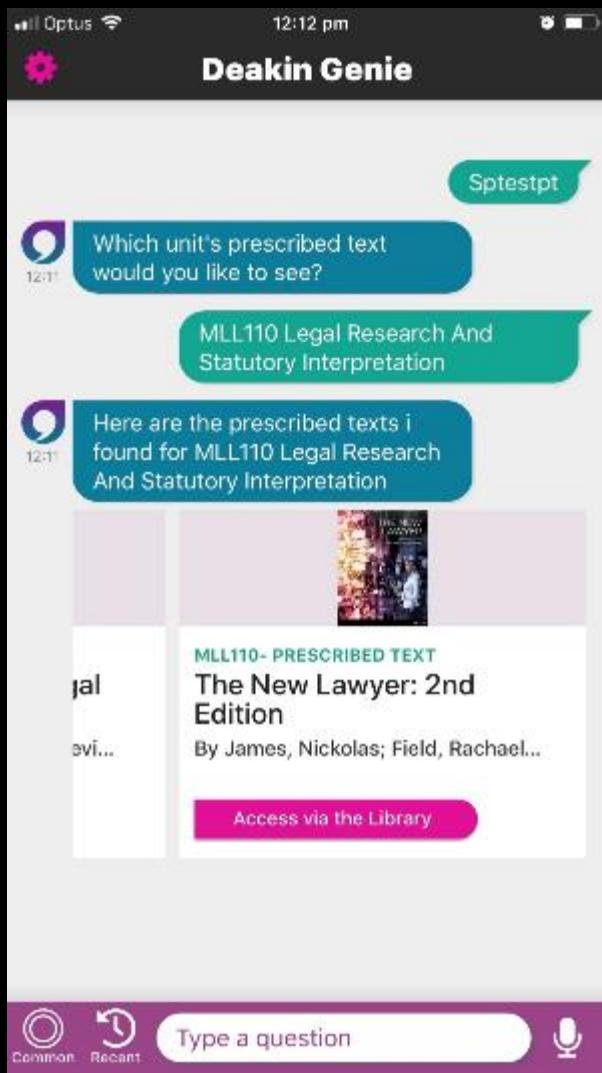
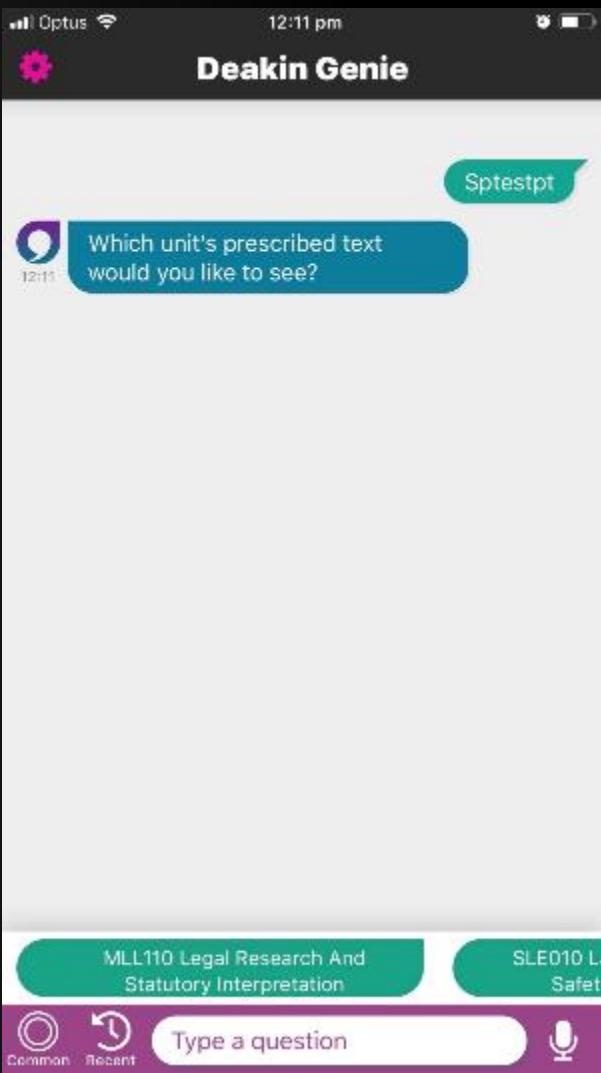
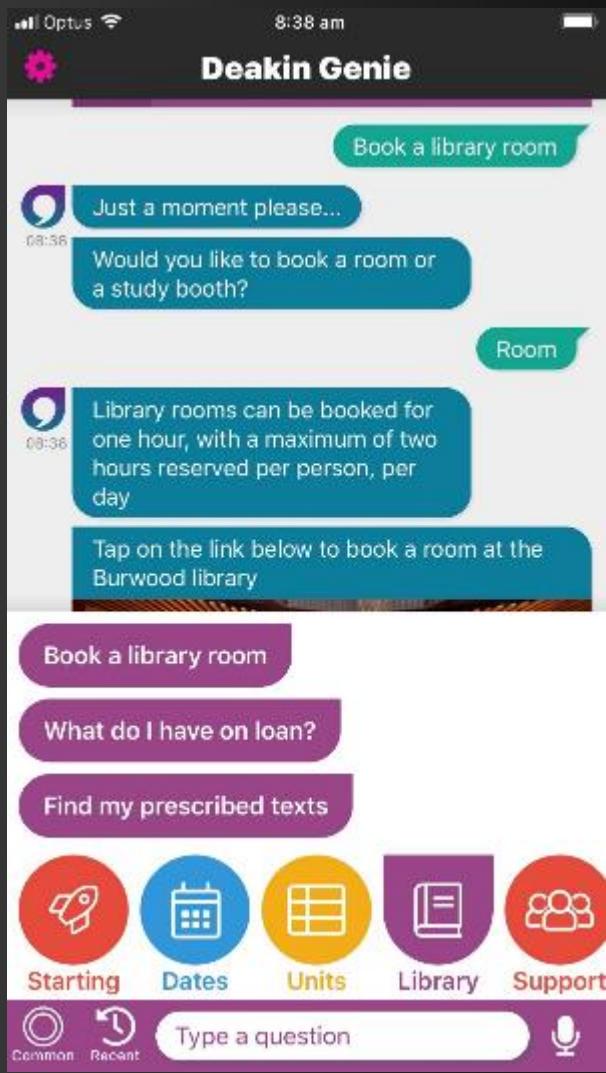
## Prescribed texts in Genie

- Support access to prescribed texts for undergraduate students
- Demonstrate and build Library capability to innovate and lead in this space





Ask Genie > Select unit > Result(s) returned > Access via native interface



# Usage data (July 2018 – Feb 2019)

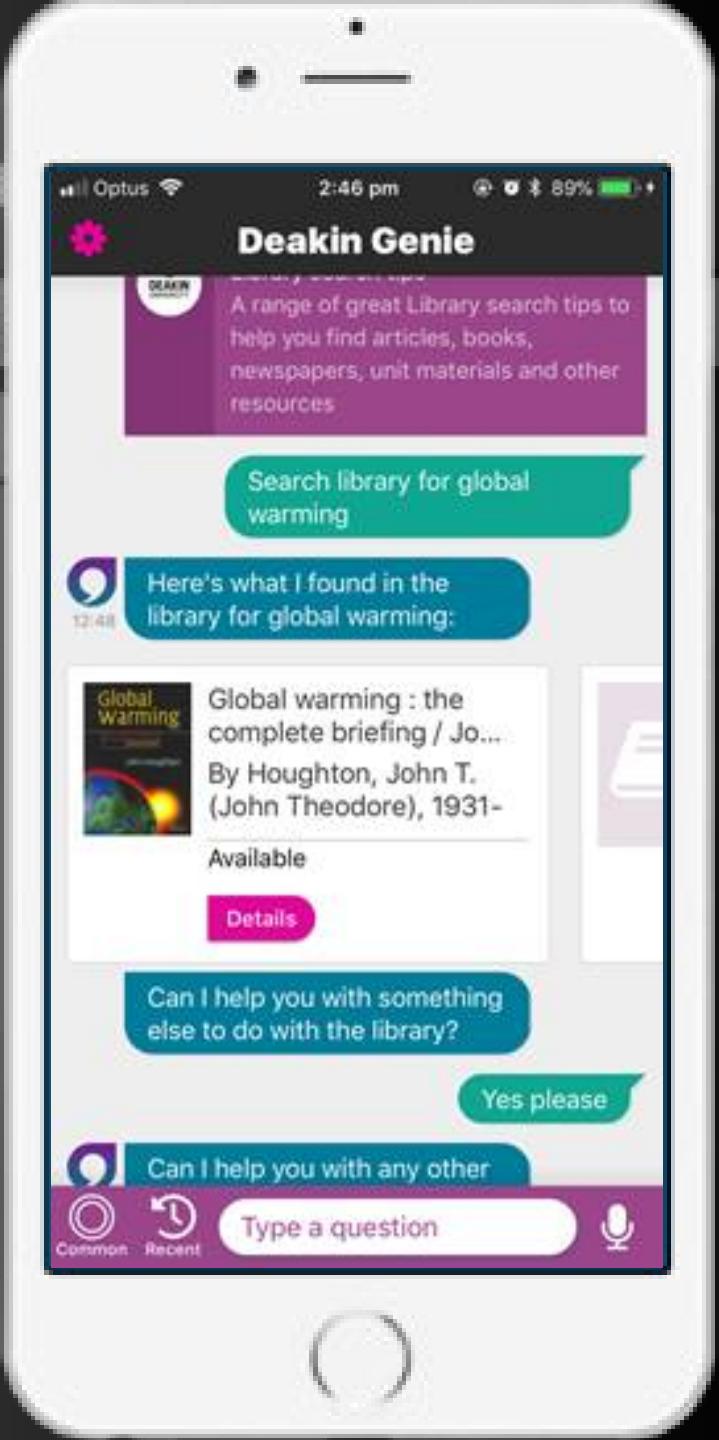
- Over 85 000 conversations in total
- Library specific: around 5000 conversations...
- ....excluding several hundred conversations related to prescribed texts and textbooks that as of March 2019 direct students to a library conversation

# Usage data (July 2018 – Feb 2019)

## Most popular conversations

- Booking library study rooms and booths
- Viewing loans
- Availability of library computers
- Library opening hours
- Library search
- Initiated by ‘common’ triggers

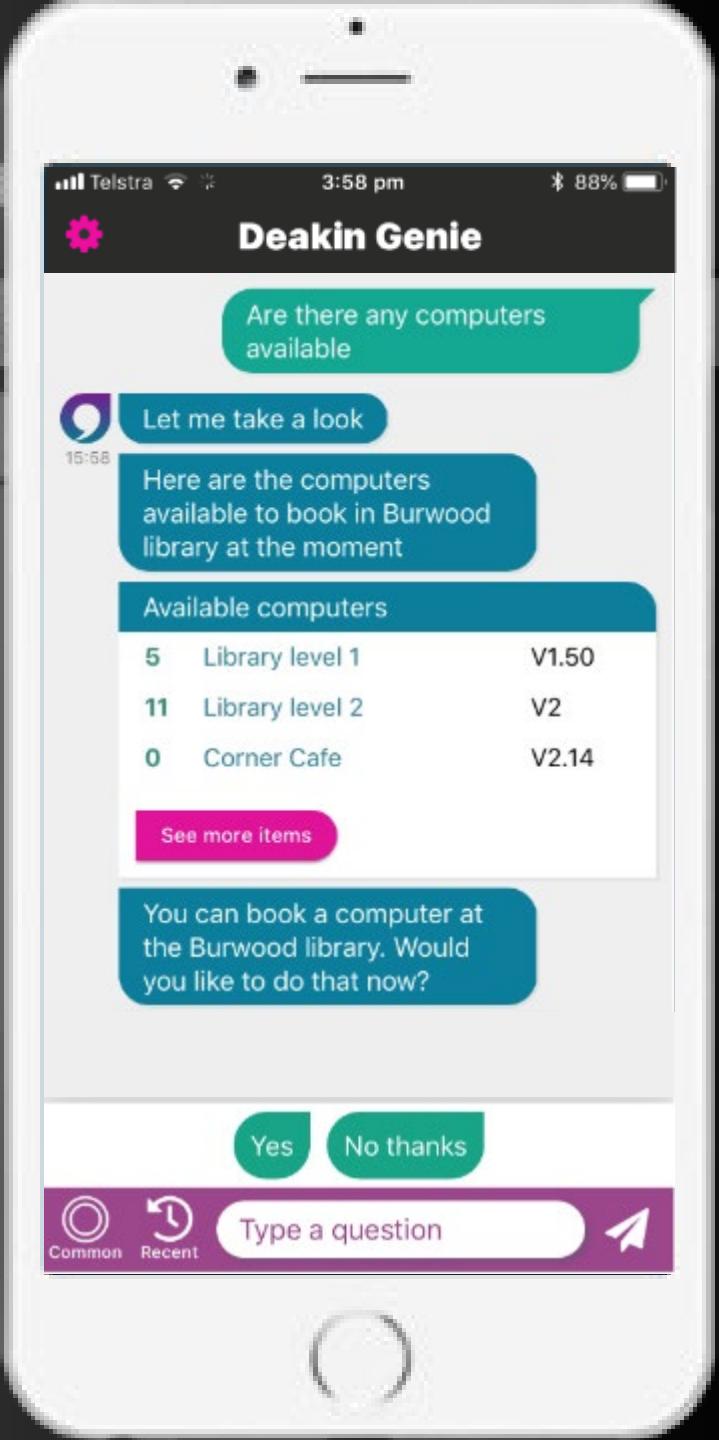




## 2019 and beyond

- Operationalisation
- Iterative improvement
- Future gazing....
- ...what does academic searching look like in a a conversation-activated, mobile and IoT world?





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Manager, Digital Experience  
Email: [d.johnson@deakin.edu.au](mailto:d.johnson@deakin.edu.au)

