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FUTURE OF MOBILE UI

FUTURE OF MOBILE USER EXPERIENCES

BRISBANE MOBILE APPLICATION DEVELOPER
MEETUP

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John Christian

CTO, Exergenics
Advisor, RHEA Technologies



Cloud-based HVAC System modelling & machine learning to simulate and discover energy saving potential for commercial real-estate.

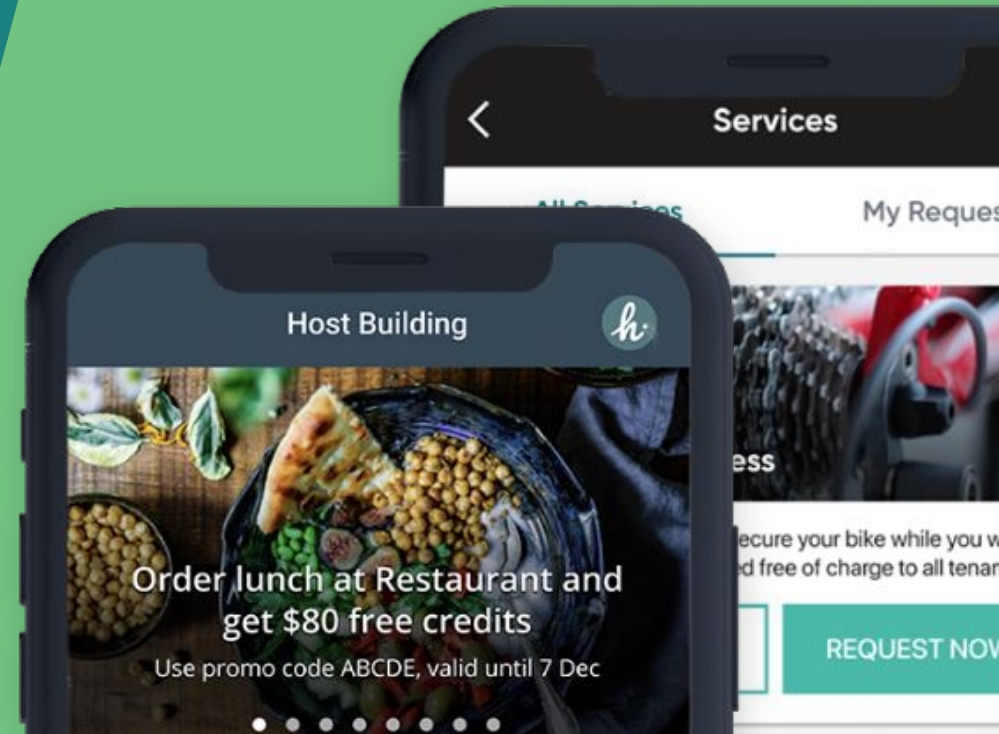


Conversational AI technology for real-estate sales agents.

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WHO AM I

Previously
Global Head of
Product & Engineering
CBRE | Host



SPECTRUM OF INTENT

Low Context

Transactional Intent

"I need to set an alarm clock for 5am."
"I need to set my out of office."
"I need to check-in"
"Should I take a train?"
"How bad is the traffic?"
"When should I book the taxi?"
"I need to cancel meetings"

High Context

User Intent

"I have an 8am flight for work I need to be on tomorrow".

Do current trends support a gradual shift to user intent driven design and what impact does that have on Application Development?

$UX = f(\text{Intent} \cdot \text{Context})$

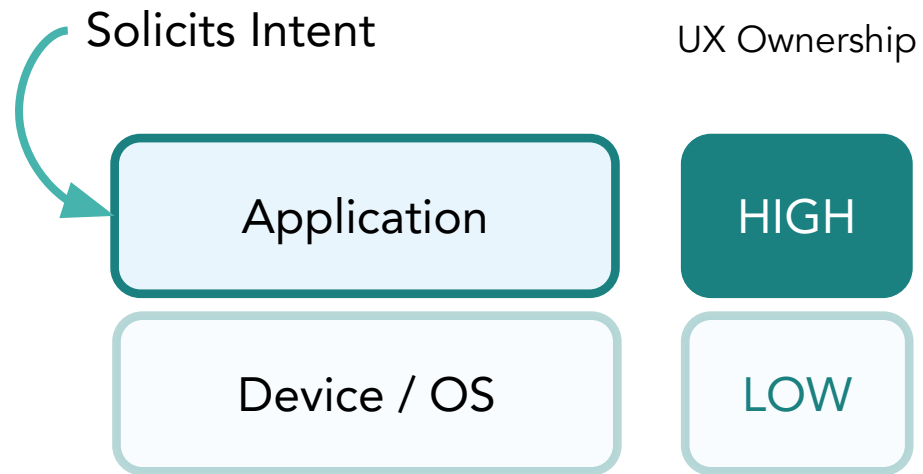
UX is the degree to which an intent is satisfied within the context the intent is made.

Apps live here

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FUTURE OF MOBILE UI/UX

CURRENT STATE OF MOBILE UX



Great UX for Transactional Intents.
Impossible for High Context User Intents.

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USER INTENT: TODAY'S CHALLENGES



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FUTURE OF MOBILE UI/UX

USER INTENT: TODAY'S CHALLENGES

Solicits Intent

UX Ownership

Application

HIGH

Device / OS

LOW

- UX bounded to App Objectives. (Subjective Outcomes) – Objective User Outcomes Minimized
- Intent limited to App Parameters (Transactional).
- Limited Context at App Level
- Serviceless

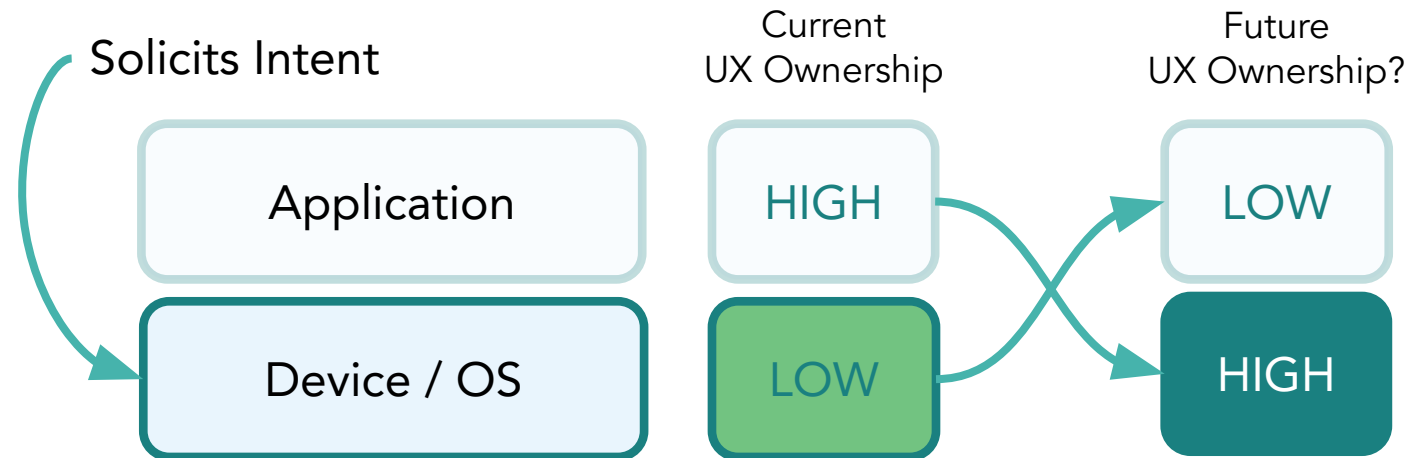


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SHIFT OF OWNERSHIP?

Are Devices/OS starting to flip the switch for UX Ownership?



- Device/OS Natural Language UI soliciting intent.
- Assistant ‘middleware’ triggering GUI-less App outcomes.
 - “App Actions”
- Identity Context Shifting to Device.
- Payment Context Shifting to Device
- Environment Context Shifting to Device.
- Devices/OS are motivated by objective user



Context Monitoring in Real-Time

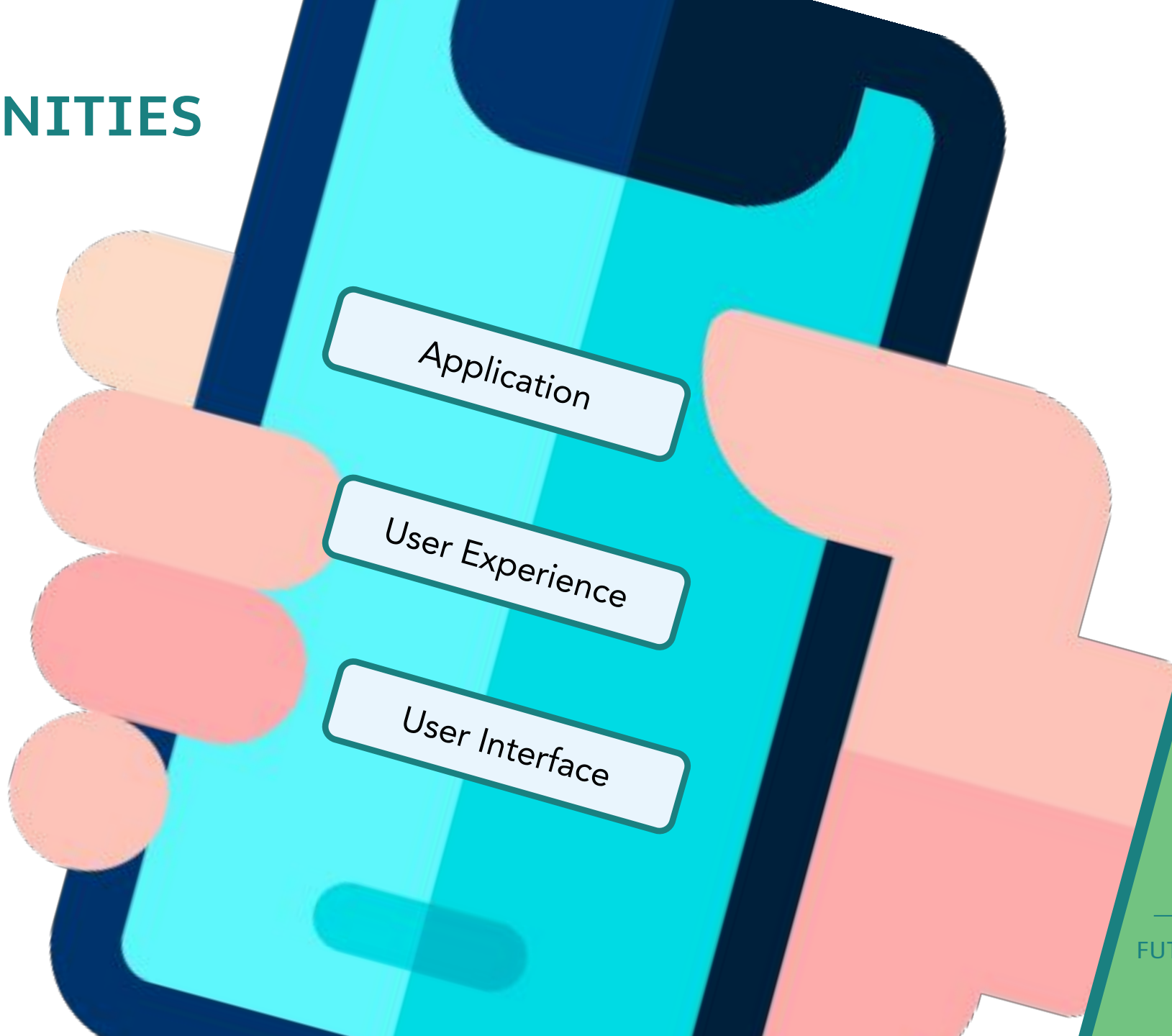
- Head Orientation
- Lip Movement
- Proximity
- Gaze direction
- Contextual Awareness

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Google IO
2022

OPPORTUNITIES



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OPPORTUNITIES FOR APPLICATIONS

"I have an 8am flight for work I need to be on tomorrow".

Application

- Headless
- Domain Definitions / Schematics
- Service Architecture
 - API / Hook Driven
 - Query-able
 - Transactional

The Device/OS will orchestrate a set of transactions that need to occur, at varying times, to deliver on a specific User Intent.

Apps will compete to be included by implementing domain-specific models/standards adopted by the Device/OS.

Bi-directional "vetting" between Device/OS and App to determine best fit relative to current context.



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OPPORTUNITIES FOR UX

"I have an 8am flight for work I need to be on tomorrow".

User Experience

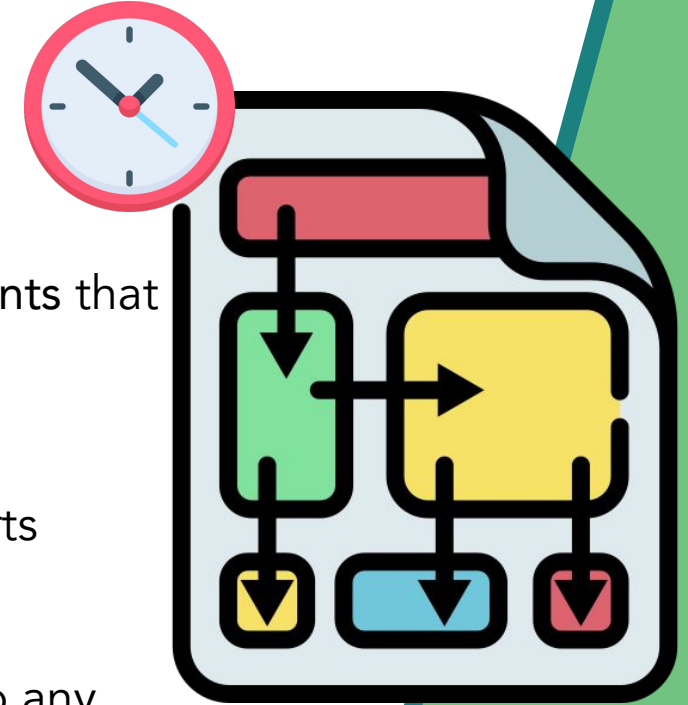
- Intent Driven
- App Service Orchestration
 - UX is unbounded by any one particular app.
 - Context-driven curation
 - Timing / (re)Scheduling

User Intents are a storyboard of transactional intents that the Device will be responsible for executing.

A User Experience spans time, continually being monitored and managed by the Device as it asserts contextual needs and as circumstances change.

Users would be able to override or add context to any transactional element and that may help improve experiences in the future.

The User would be able to define their own storyboards and may play an active role in "training" future experiences.



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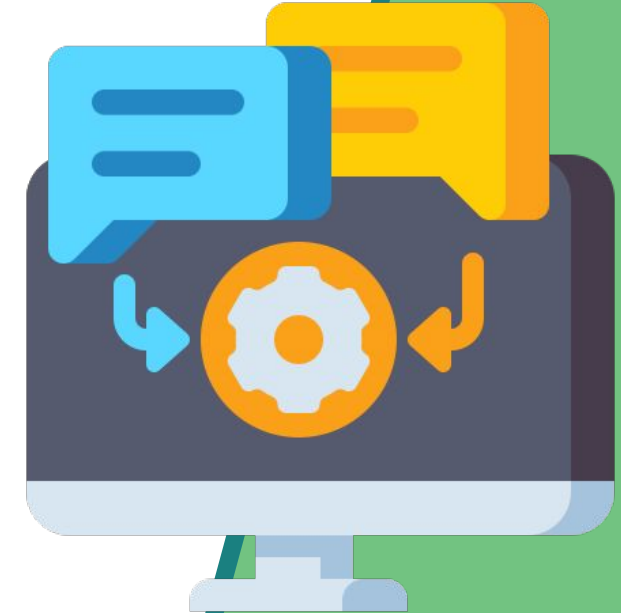
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OPPORTUNITIES FOR UI

"I have an 8am flight for work I need to be on tomorrow".

User Interface

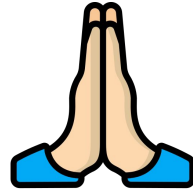
- Conversational
 - Speech
 - Text
 - Suggests
 - Variables are assumed and/or queried with suggested responses.
1. NLP is natural fit for User Intent driven design.
 2. Natural Language Processing (NLP) & Natural Language Understanding (NLU) are on high growth trajectories.
 1. Compound Annual Growth Rate ~20%
 2. AUD \$50 billion market size per year by 2026
 3. "Co-operative Principle" between human and computer helping improve adoption.
 4. Thicker clients mean more computing capability for NLU processing client side.
 5. Conversational AI includes Speech Understanding, Written Understanding and Generated Text.
 6. Implemented by the Device/OS, not app.



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THANK YOU



Thoughts? Questions? Complaints?

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