

AIP Final Presentation

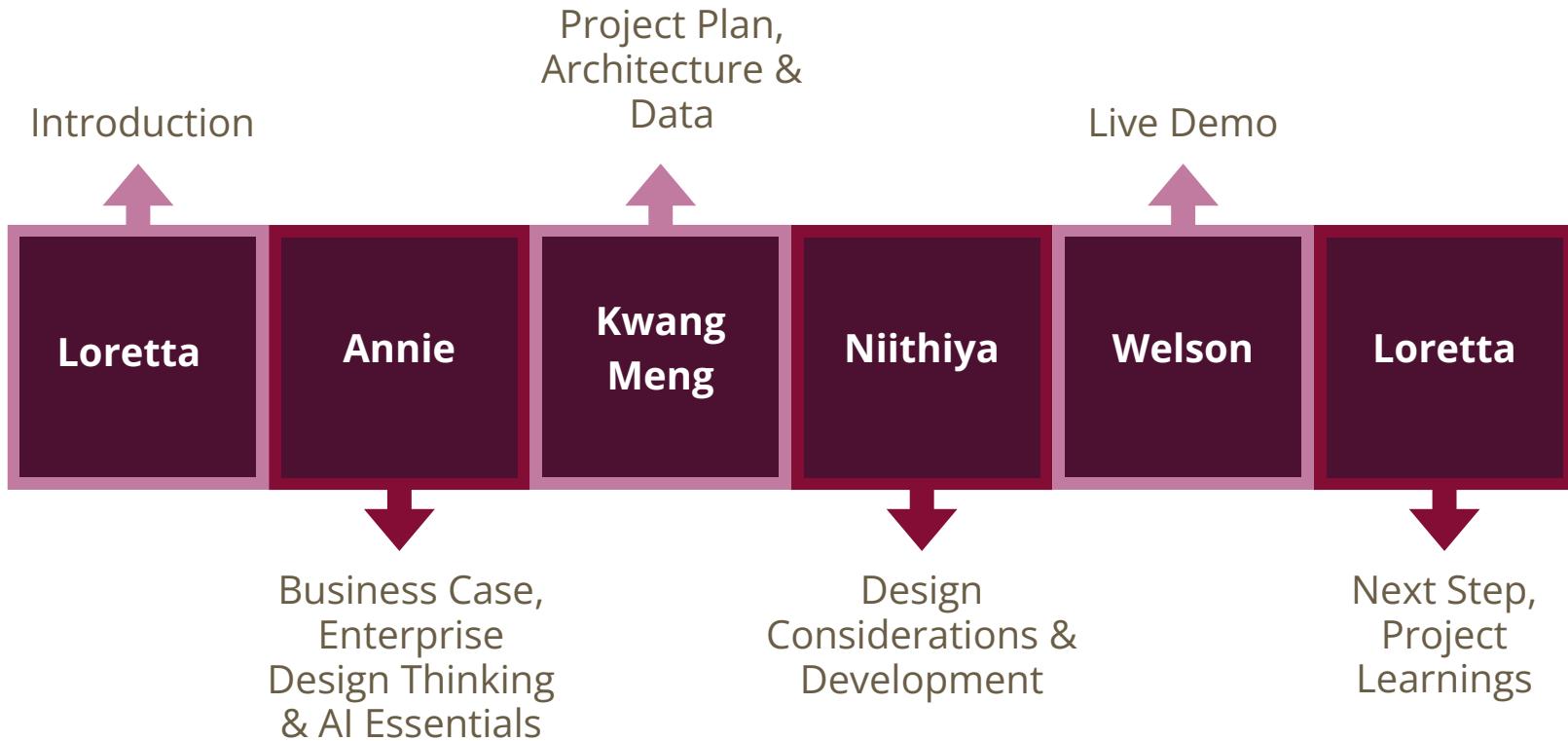


Class: IMVAI-1502 | Team 3

Team Members:

Loretta, Annie, Kwang Meng, Niithiya, Welson

Agenda



Presentation Goals



How we understood consumers' issues,
what the business problem is

What were the processes undertaken to resolve
the business problem

How and why we designed the virtual
agent – PrintBot

What happens after deployment

What are our future plans

Introduction

Project Objective:

To improve quality of support and enhance customer's experience by implementing a readily-available AI solution for Expressprint

Tools Used:

- 1) Google Drive – for team discussions and presentation
- 2) Mural and Miro – for collaboration on Enterprise Design Thinking and AI Essentials
- 3) Watson Assistant – for virtual agent
- 4) Watson Discovery – for web crawling to Expressprint's website
- 5) Cloud Function – for product recommendations
- 6) Amazon AWS Amplify - for website mockup of prototype

Teammates' Project Roles

Loretta

- EDT and AI essentials
- Intent design
- Conversation flow design
- **Solution development (lead)**
- Training & testing
- Future plans, tracking, monitoring

Annie

- ***EDT and AI essentials (lead)***
 - Intent design
 - Conversation flow design
 - Training & testing
- /* affected by COVID

Kwang Meng

- EDT and AI essentials
- ***Project planning (lead)***
- Intent design
- Conversation flow design
- Solution development
- ***Training & testing (lead)***

Niithiya

- EDT and AI essentials
- Intent design
- Conversation flow design
- **Solution development (lead)**
- Training & testing

Welson

- Business case
- EDT and AI essentials
- Intent design
- ***Conversation flow design (lead)***
- Solution development
- Training & testing

Business Case



Problem Statement

The Expressprint is currently facing challenges in replying its customer's inquiries promptly after working hours and also during the high demand period during the office hours.

These problem have negatively impacted on customer service quality as well as revenue lost for the company.



Who is Expressprint?

- 1) #1 Wholesale Printer in Singapore (est 2005)
- 2) Prints anything on paper except money
- 3) 100% online
- 4) Bestsellers include business cards, stickers, flyers
- 5) Business conducted via website only
- 6) Website: www.expressprint.com.sg

Singapore #1 Wholesale Printer since 2005
Low MOQ Quality Assurance Fast Turnaround No Nonsense

www.expressprint.com.sg Get instant price online 24/7

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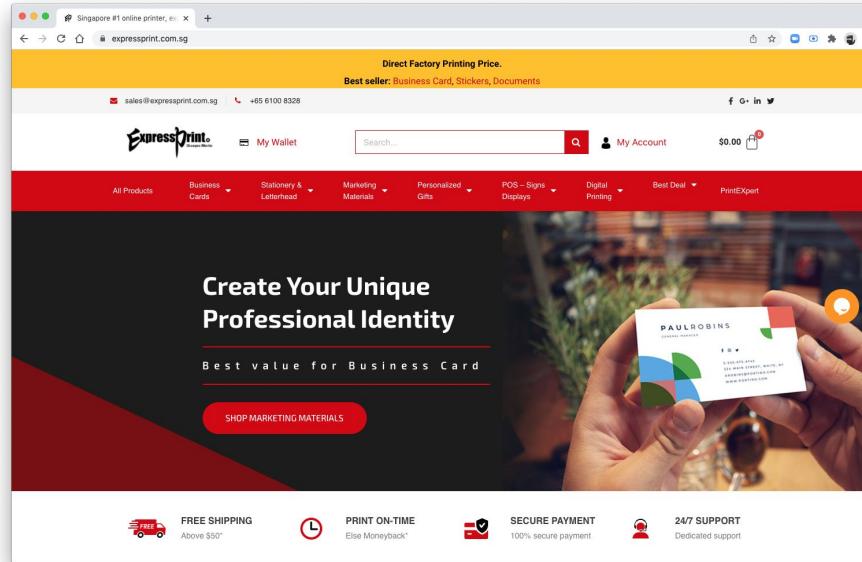
www.expressprint.com.sg Get instant price online 24/7

THE BUSINESS TIMES
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Continued on Page

newly minted identities on wood pulp.
So ingrained is this urge that leading namecard outfit Expressprint has calculated that if all the cards it printed in 2013 were laid end-to-end, there would be enough of them to circle the coastline of Singapore, Twice.
It has been more than a thousand years since man first decided that he needed to put down in concrete terms, outside the confines of his mind, proof that he was who he said he was.

THE RAILWAYS CONVERSATION
MICHAEL DELI, CHAIRMAN
AND CEO OF DELL INC. | 8:45 AM
MOTORING
The electrifying
BMW i3 Hybrid | 10:30 AM
WEALTH
Industral pretences
getting fancier | 11:30 AM



Step 1

Select product
+ Make selection
+ Check out



Step 2

Print in progress



Step 3

Ready for
collection / delivery

Sales Process in 3 Steps

Expressprint's Customer Service Channels

1. **Live Chat** (via www.expressprint.com.sg)
2. **Hotline** (+65 61 00 83 28)
3. **Whatsapp** (+65 88 20 21 22)
4. **Email** (sales@expressprint.com.sg)

Channels' Operating Hours:

Live Chat	Monday to Friday (Except PH) 9:30am to 6:pm	Limited to geolocation of Singapore & Malaysia
Hotline	Expect instant reply	
WhatsApp		No limitation of geolocation
Email	24x7, Expect reply within 1 business day	

Expressprint's Current Situation

1. Overwhelmed by Live Chat requests
 - a. Long waiting time / unhappy customers
2. Many frequently asked questions
 - a. Manual response / waste resources
3. Potential Loss of Sales
 - a. After office hours
 - b. No timely reply
4. Wasted resource for "standby" staff
 - a. Unable to schedule staff for specific hours due to random spike of requests

Enterprise Design Thinking and AI Essentials





Name

Nick Tse

Profile

Age 45

Location Singapore

Education Degree-holder

Job Small business owner

Technical literacy Basic understanding and use of social media, web and mobile applications

Motivations

understand about products and services

get printing of products done efficiently

Goals

clarify queries

get quotations

order prints

Needs

assured of reliability

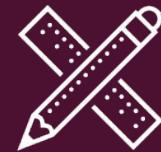
satisfaction with accuracy of service

Persona



Pain Points

- 1) Overwhelmed by information and ordering process
- 2) Lack of timely support



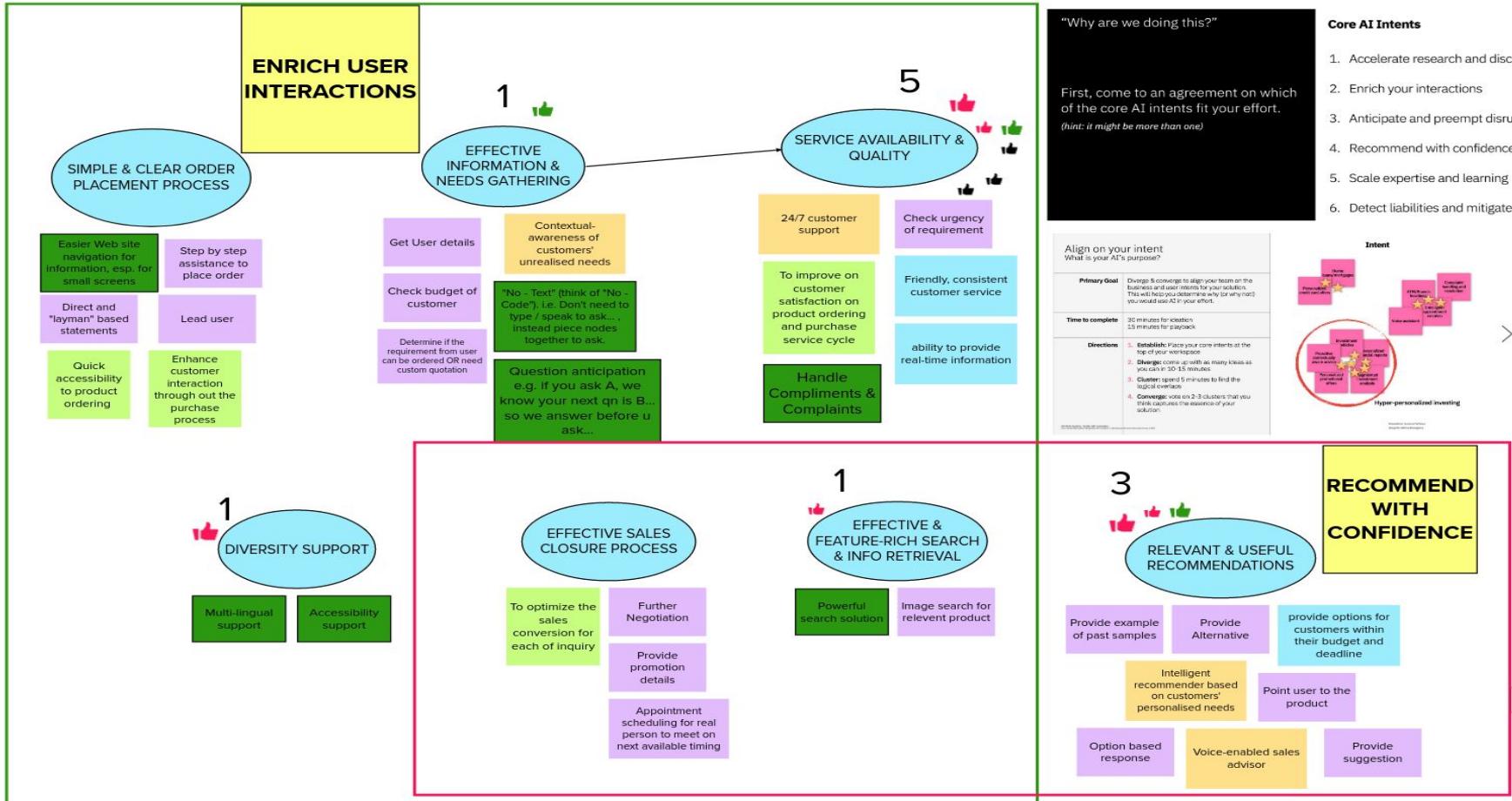
HMW Statement

How might we make it easy to get timely, quality support for print customers so that they feel assured and satisfied to place orders

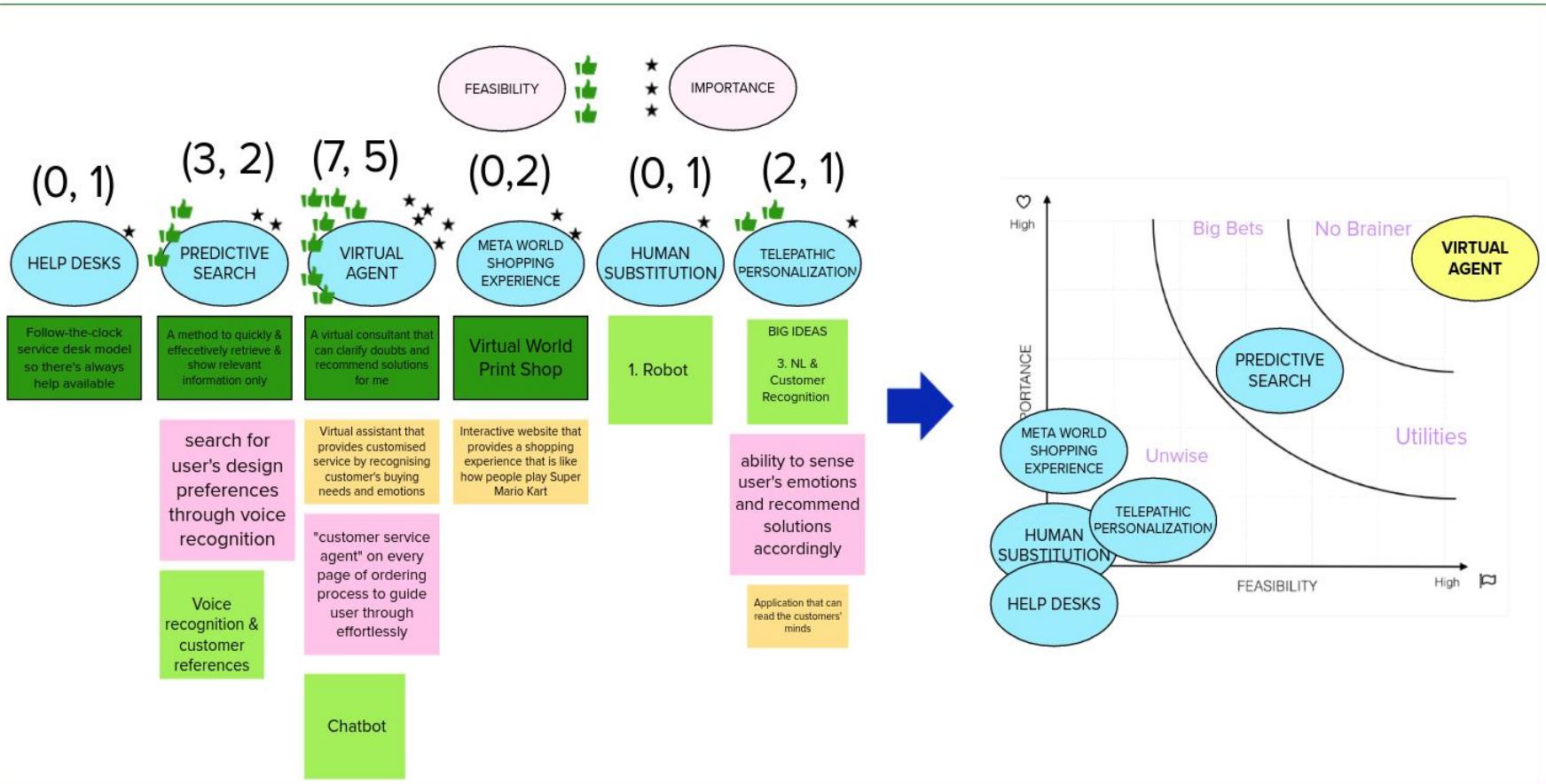
AI Intents

Enrich user interactions
Recommend with confidence

Big Ideas



Idea Prioritization Grid



Big Idea Overview

- Virtual Agent Solution which is able to answer customer queries quickly

“PrintBot – the best type of friend you need.”

~ always helpful, always there ~



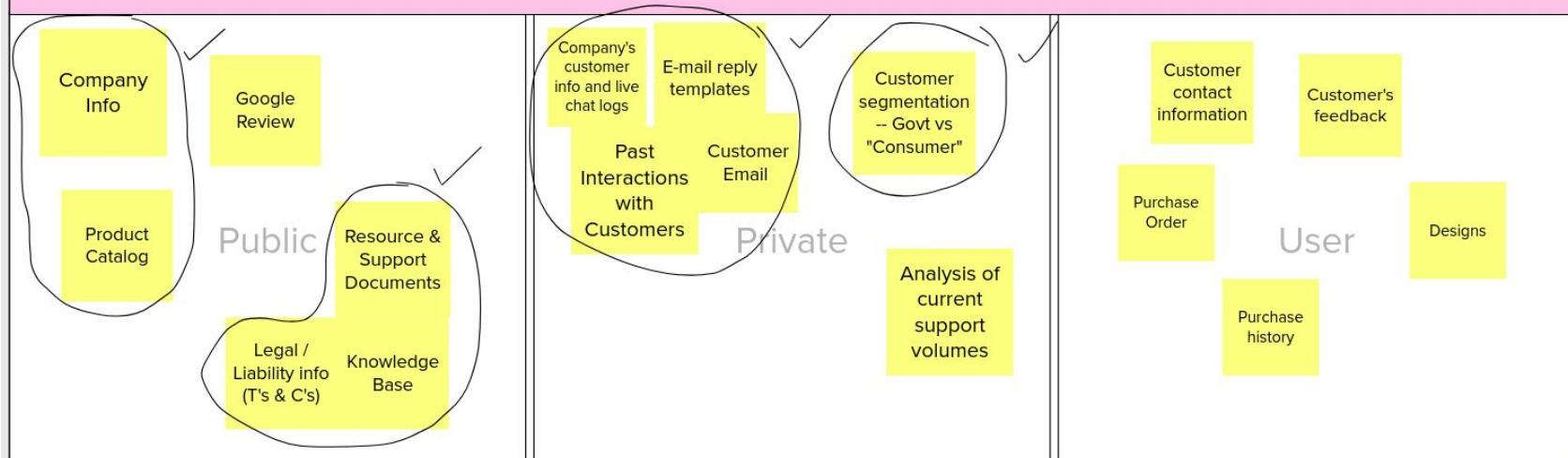
Data



Data We Need and Have

HAVE		
Public	Private	User
Company Info	Company customer's info & live chat logs	Customer contact information
Google Review	Voice record from customer's inquiries	Customer feedback
Product Catalog	Email reply templates	Purchase order
Resource & Support Documents	Past interactions with customers	Purchase history
Knowledge Base	Customer Email	Designs
Legal Liability Info (T's/ C's)		
WANT/NEED		
	Common mode of communication	Frequency of customer's orders
	Issues faced by chat agents	

HAVE



WANT/NEED

Want/Need Want/Need Want/Need

issues faced by chat agents

common mode of communication

frequency of customers' orders

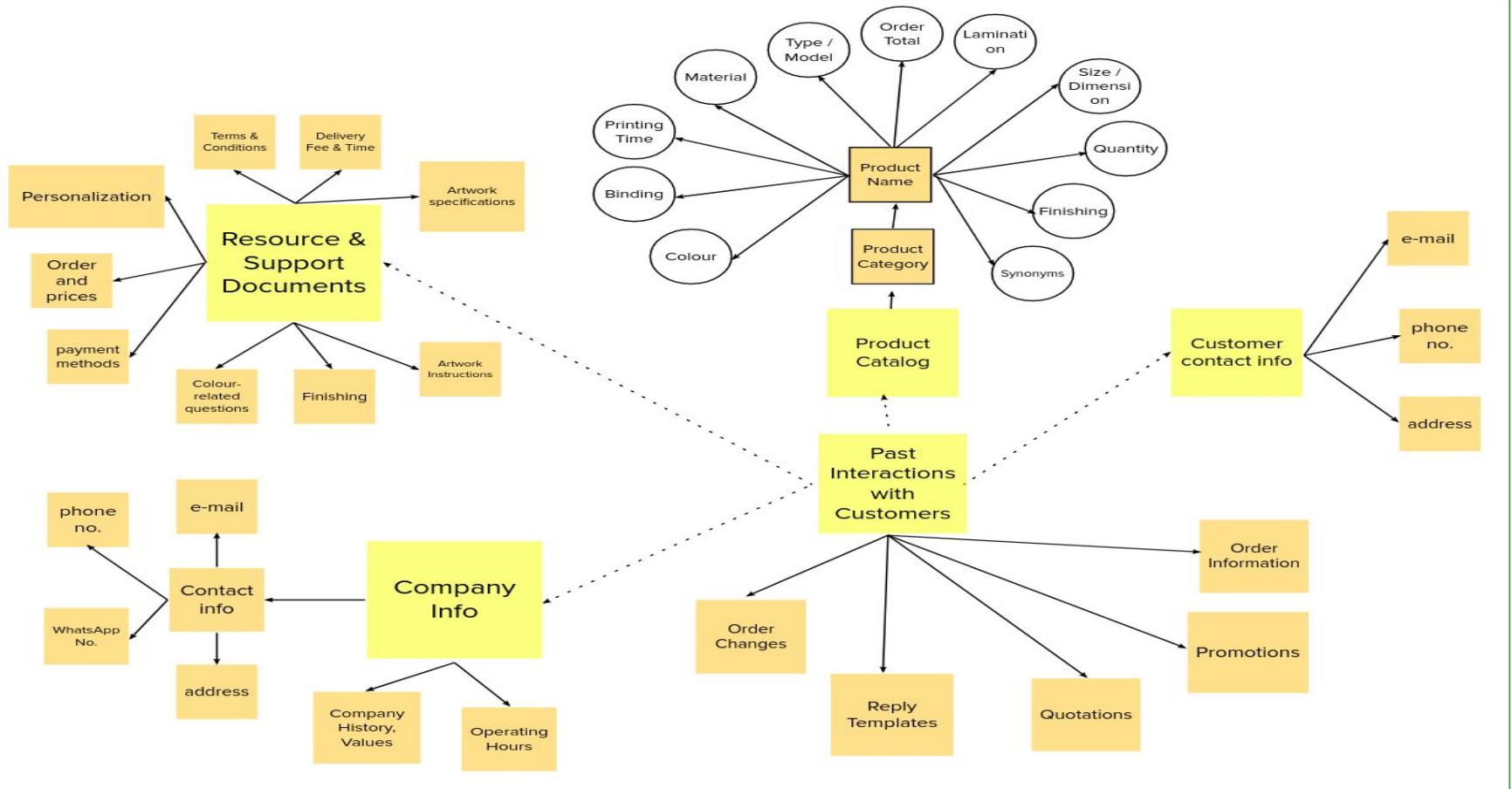
Understanding



Understanding

- Run through to analyze and understand the set of identified data sources
- Determine what data need to train AI so it can understand the ins and outs of the main domain.
- The AI will begin to learn jargon, trends and patterns in the data that have fed into the system.

Understanding



Reasoning

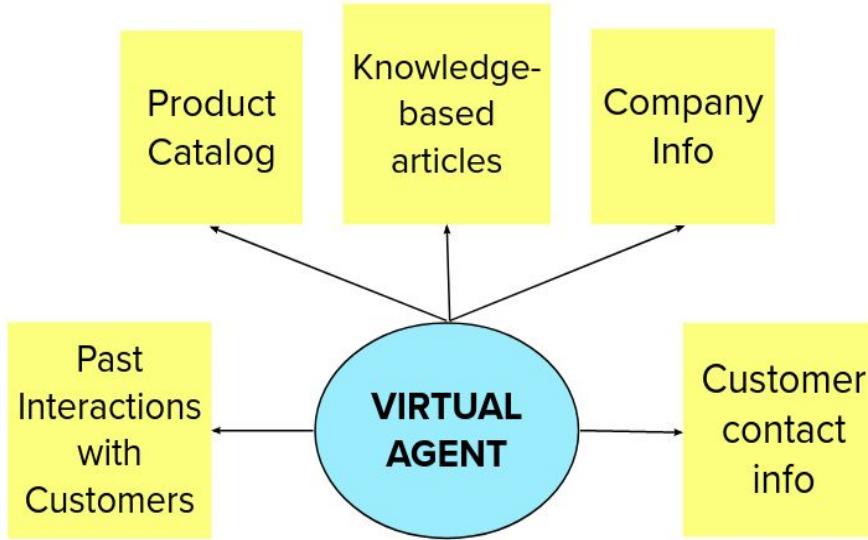


Expressprint can offer timely and quality support by utilising a virtual agent based on product catalog, knowledge base, and past interactions with customers.



Reasoning Statement

Reasoning



HOW MIGHT WE

make it easy to
get timely,
quality support

FOR

print customers

SO THAT

they feel assured
and satisfied to
place orders

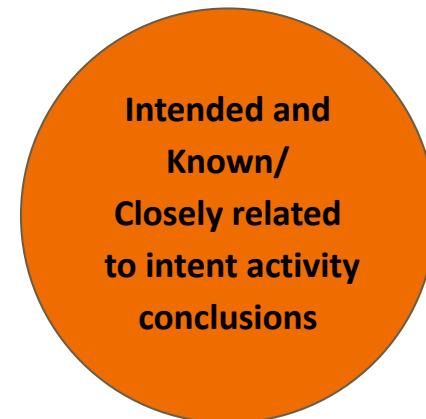
Knowledge

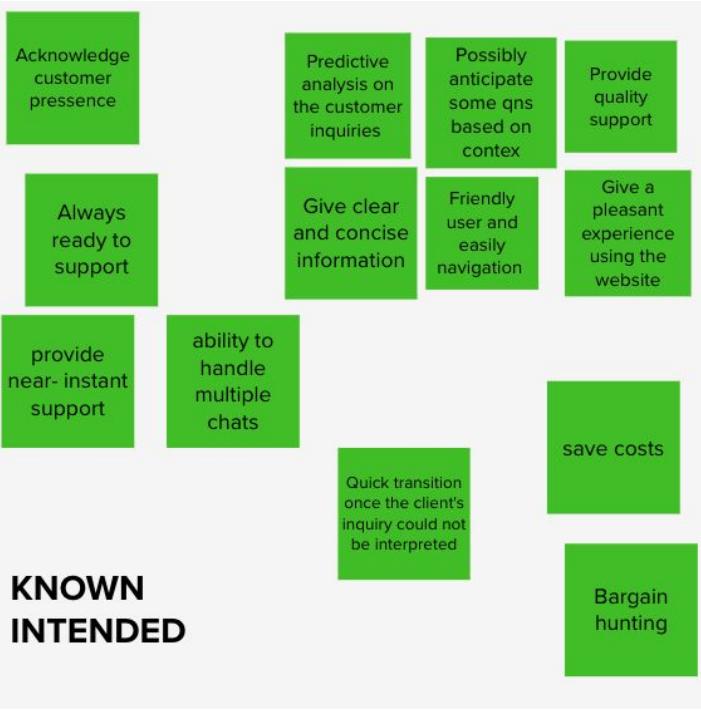


PRIMARY EFFECTS

- Acknowledge customer presence
- Always ready to support
- Predictive analysis on the customer inquiries
- Provide near- instant support
- Give clear and concise information
- Friendly user and easily navigation
- Possibly anticipate some Question based on context
- Provide quality support
- Give a pleasant experience using the website
- Ability to handle multiple chats
- Quick transition once the client's inquiry could not be interpreted
- Save costs

CHARACTERISTICS

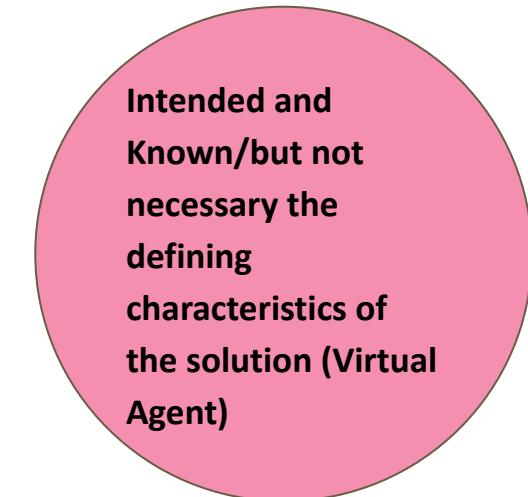


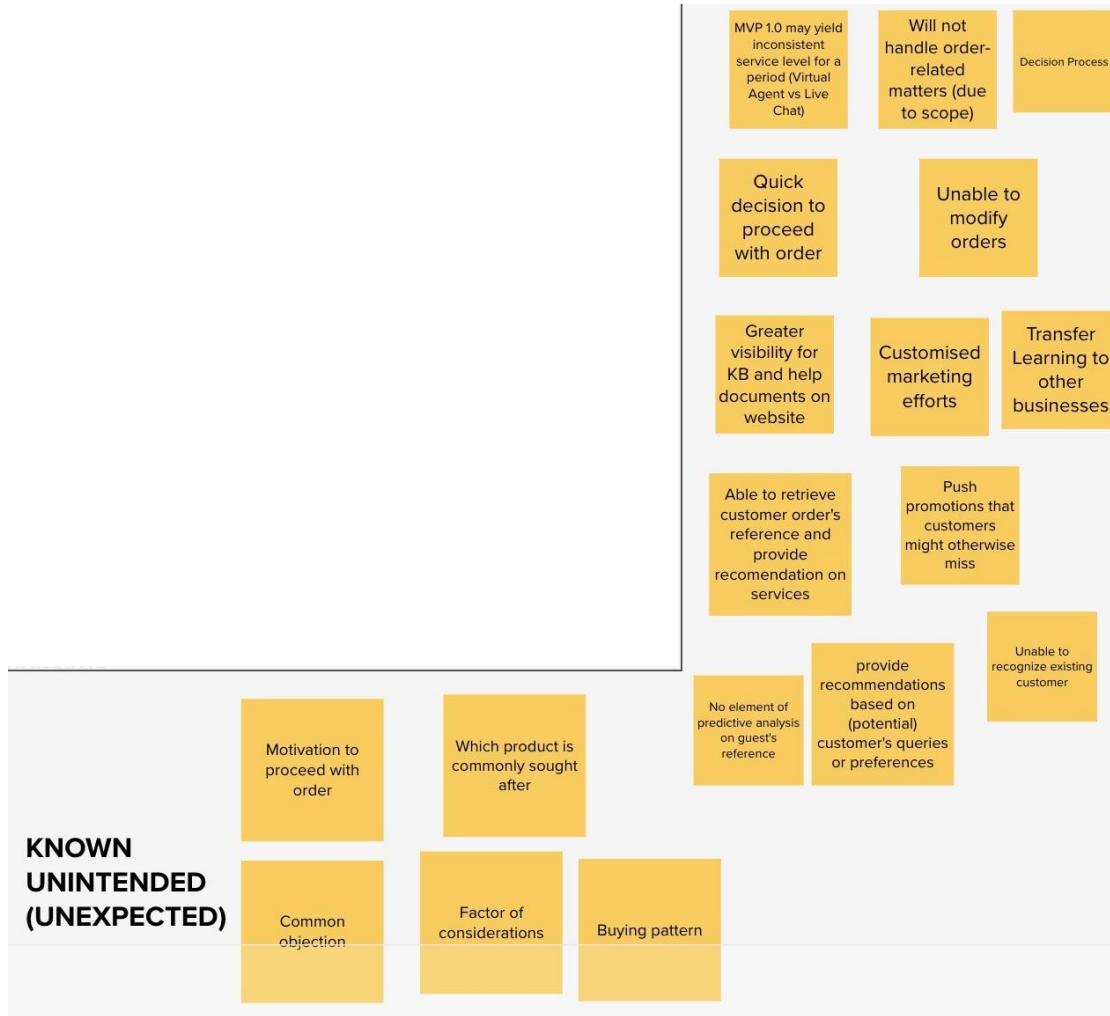


SECONDARY EFFECTS

- Customized marketing effort
- Transfer learning to other businesses
- Quick decision to proceed with order
- MP1.0 may yield inconsistent service level for a period (Virtual Agent vs Live Chat)
- Will not handle order related matters (due to scope)
- Unable to modify order
- Push Promotions that customers might otherwise miss
- Motivation to proceed with order
- Provide recommendations based on (potential) customer's queries or references
- Which product is commonly sought after

CHARACTERISTICS





TERTIARY EFFECTS

- Job displacement
- Focus on the staff morale once implementation on the solution
- Enhancement on quality service to customer and appropriate training to staff force
- System down
- Mono Tone
- Backend processing
- Breach of PDPA
- Competitors with more advanced virtual agents
- Focus on customer's solution

CHARACTERISTICS





Project Plan



Project Goals

1. Design, develop and deploy a virtual agent solution which:
 - Answers customer queries quickly
 - Transfers customers smoothly to “live” service consultants, when and where necessary

2. Demonstrate through the solution:
 - Effective application of design concepts for AI solutions
 - Effective use of AI technology

Project Scope

In Scope

- Answer queries on products, services, orders, payments, delivery, policies
- Transfers to agents

Out of Scope

- *Customer account / funds management*
- *Requests that require negotiation / discussion (e.g. price, NDAs, RFCs)*
- Data beyond those published available at Expressprint's web site
- Changes to Expressprint's published content

Project Risks

Risk	Impact	Risk Management
Resource impacts due to COVID-19	Deliverable milestone delay	Accept Adopt a more conservative approach in project scope and resource planning
Unfamiliarity with Watson Assistant and Watson Discovery	Deliverable milestone delay Deliverable quality Deliverable completeness	Mitigate Plug knowledge gaps through research, experimentation, information sharing and supplementary online courses

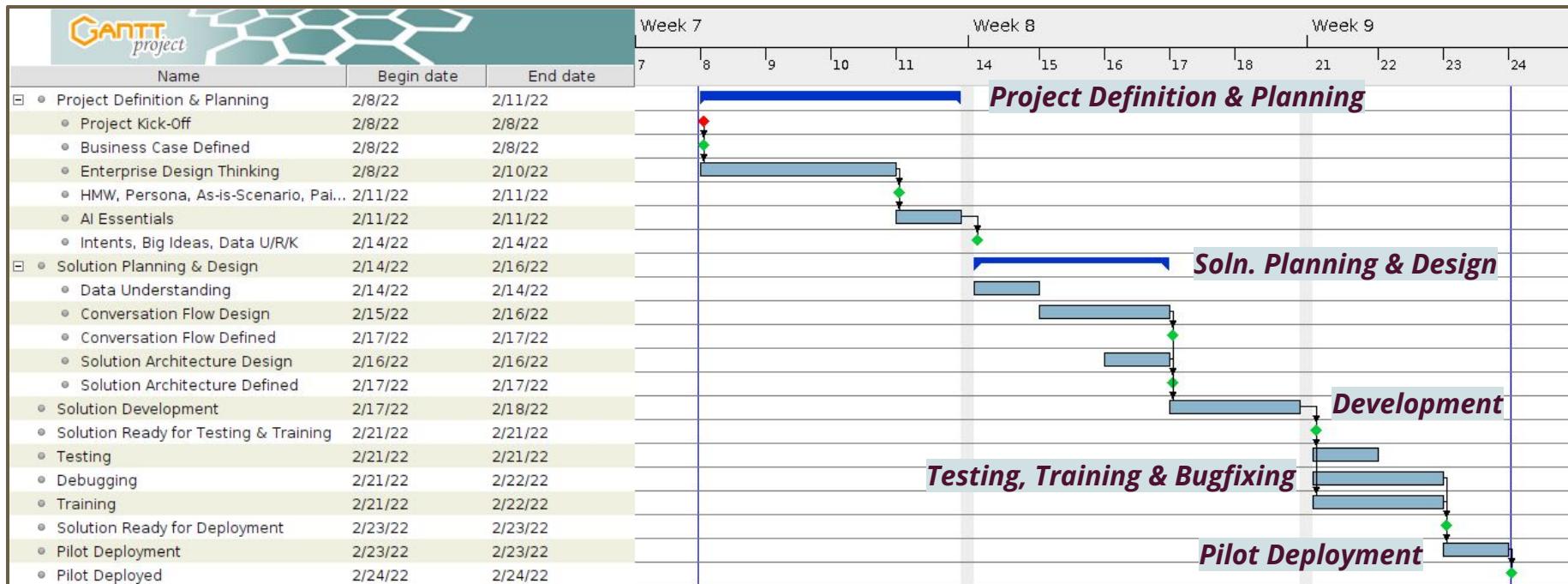
Project Success

We are successful when we accomplish these:

1. Project Goal #1:
 - Develop and Deploy MVP 1.0 Pilot on schedule
 - Obtain sign-off from customer sponsor

2. Project Goal #2:
 - Complete the AI Course Project Assignment... and Pass! :)

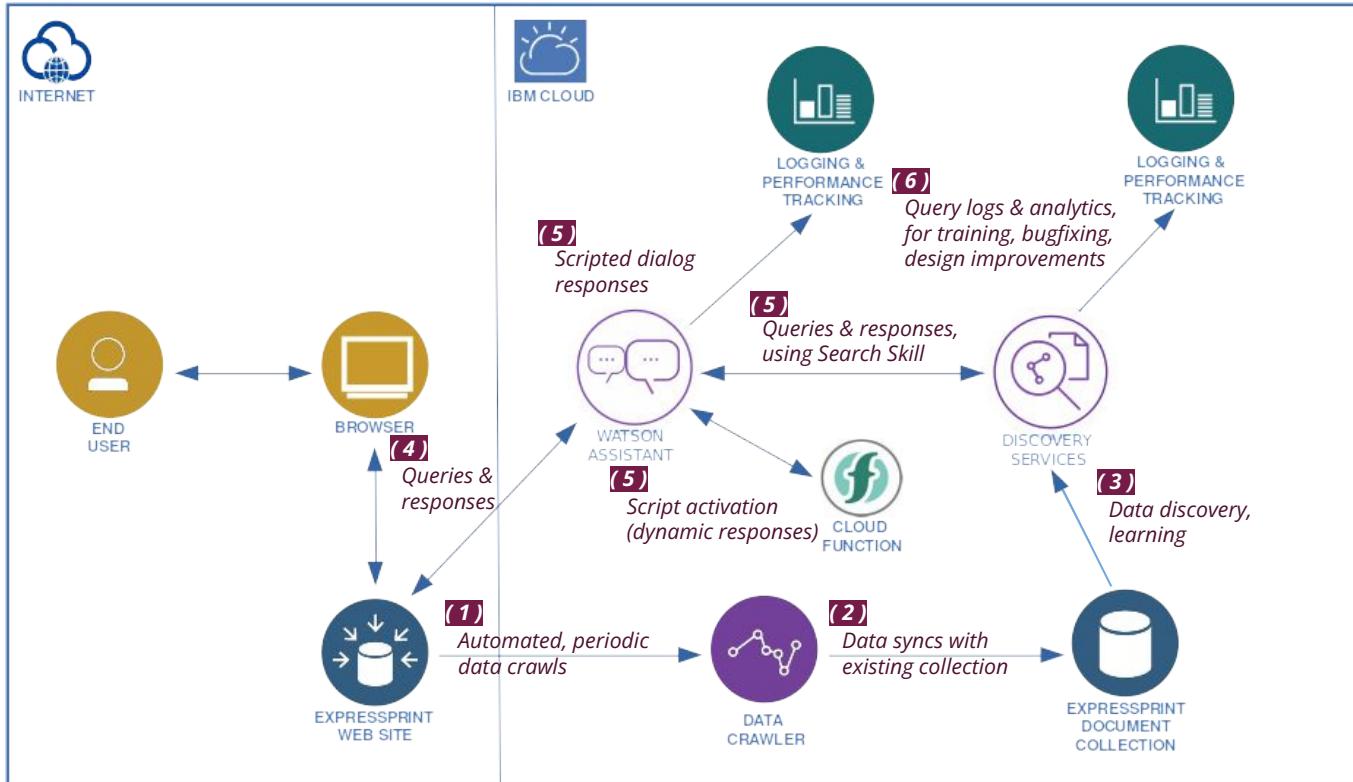
Project Schedule



Architecture & Data



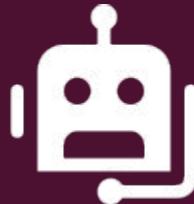
Solution Architecture



Solution Data

Data Source	Data	Usage
Expressprint web site	Product information, knowledge base, company information	<ul style="list-style-type: none">– Watson Assistant (intents, entities, dialog)– Watson Discovery (discovery, training, search results)
Expressprint management	<ul style="list-style-type: none">– Customer service workflow– “Live chat” / e-mail query & response samples / templates– External consultants’ rebranding research report	<ul style="list-style-type: none">– Conversation flow design– Intents, entities, dialog– EDT & AI Essentials: Persona, pain points, intents, big ideas
Team members	Suggested chat queries / responses	<ul style="list-style-type: none">– Intents, dialog

Design Considerations & Development





Brainstorming Process



Intents

<input type="checkbox"/> #Customer_Care_Store_Hours	Business Operations	<input type="checkbox"/> #Question_Out_Of_Chatbot_Scenario	Agent Transfer
<input type="checkbox"/> #Customer_Care_Store_Location			
<input type="checkbox"/> #Customer_Complain	Customer Queries	<input type="checkbox"/> #Payment_Method	Payment
<input type="checkbox"/> #Customer_Request			
<input type="checkbox"/> #Delivery_Self_Collect	Delivery	<input type="checkbox"/> #Order_Issues	Order
<input type="checkbox"/> #Delivery_Self_Courier		<input type="checkbox"/> #Order_Status_and_Delivery_I	
<input type="checkbox"/> #Delivery_Timeline_Fees			
<input type="checkbox"/> #Delivery_Timeslots			
		<input type="checkbox"/> #Product_Information_or_Ord	Product
		<input type="checkbox"/> #Product_or_KnowledgeBase_I	

Entities

Entity (8) ↑	Values
<input type="checkbox"/> @faq	delivery-collection, die-cut, finishings, free-business-card-template-canva, h...
<input type="checkbox"/> @order_enquiry_options	Order_Delivery_Self-Collection, Order_Edit, Order_Cancel, Order_Status, Ord...
<input type="checkbox"/> @order_issue_options	Order_Issue_Unlisted, Order_Issue_Material, Order_Issue_Size, Order_Issu...
<input type="checkbox"/> @payment_category	online_order, invoice_request, gov_agency
<input type="checkbox"/> @policies_non-kb	terms-and-conditions, acceptable-print-policy, contact-us, customer-testimo...
<input type="checkbox"/> @product	rollup-stand, hardcover-note-book, l-shape-plastic-folder, label, letterhead, l...
<input type="checkbox"/> @product-category	large-format-printing, offset-printing, personalised-gift, digital-printing
<input type="checkbox"/> @reply	yes, no

@sys-time

Extracts time mentions (at 10)



On

Context Variables

Opening

Customize 

Node name will be shown to customers for disambiguation so use something descriptive.

Settings

Then set context

The conversation_start node should be used to set context. [Learn more](#)

Variable	Value	
\$name	Enter value	
\$counter	0	
\$product	Enter value	

4 Design Considerations

- Personal Touch
- Agent Transfer
- Response Details & Confirmation
- Dynamic Data Retrieval



Personal Touch

Hi there, I'm PrintBot, your 24x7 Expressprint virtual consultant. I can help with questions about:

- Products and services,
- Order, delivery and payment,
- Operating hours and store location

How may I address you? 😊

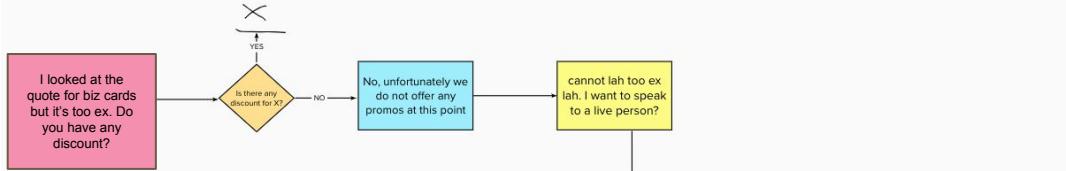
Niits

Hello, Niits! Nice to meet you. How can I help you today?

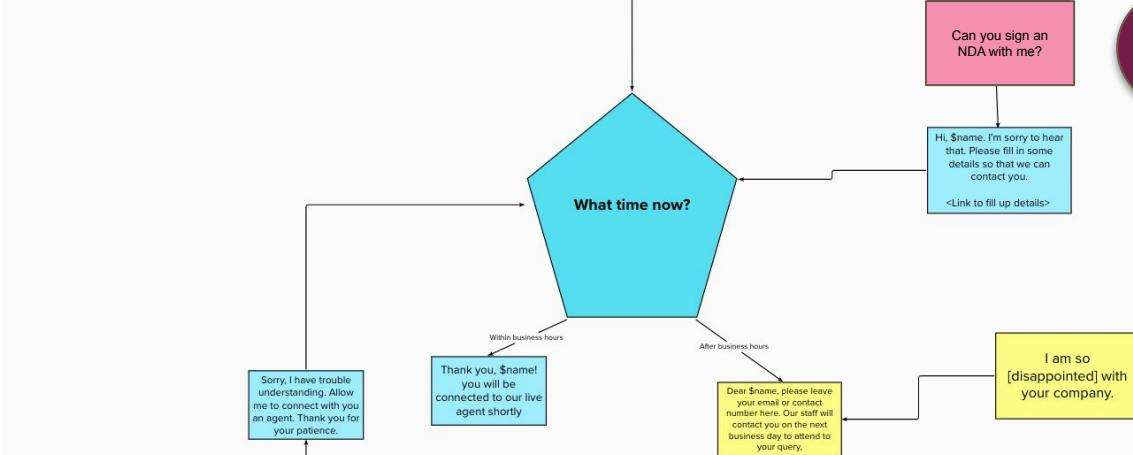
I'm sorry that I still don't quite get the question, Niits 😔 Please rephrase your question once again.

Agent Transfer

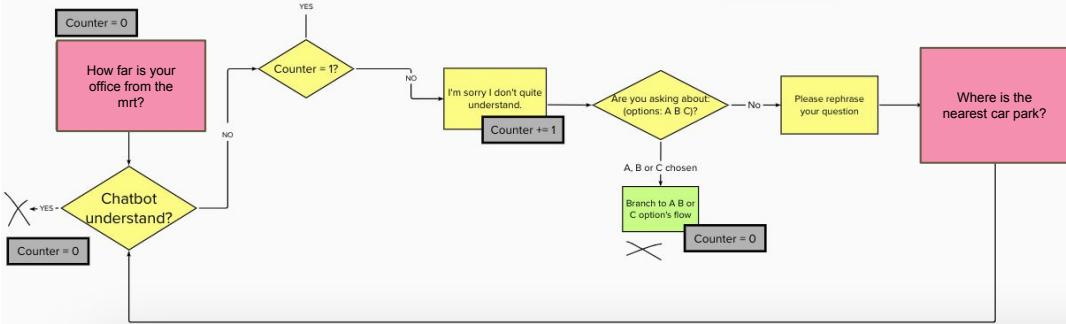
1



2



3



Response Details & Confirmation

Hi there, I'm PrintBot, your 24x7 Expressprint virtual consultant. I can help with questions about:

- Products and services,
- Order, delivery and payment,
- Operating hours and store location

How may I address you? 😊

Niits

Hello, Niits! Thanks for visiting Expressprint. Please feel free to ask me a question.

do you print certificate?

Thank you for your enquiry, Niits. Please click on this link to view information and place orders for certificate:
<https://www.expressprint.com.sg/product/certificate>

URLs

what is lamination?

I searched my knowledge base and found this information which might be useful:

Lamination | Singapore printing serv...

Common types of *laminate* are gloss, matt. Previous How to request for pricing / quotation? Next Round Corner Post navigation ← Previous Knowledge Base - Article Next Knowledge Base - Article → Leave a...

See more

See more ▾

Is your query resolved?

yes

Glad I managed to help, . Please feel free to ask me any other questions. 😊

Fragment

give me information about die-cut

I searched my knowledge base and found this information which might be useful:

Dos and Don't of die-cut | Singapore ...

Created On 16/05/2020 by Nelson Ang DIE LINE PRECAUTIONS Cutting Edge Tolerance: +/- 1mm Below are mis-registration scenario that can be happen during the die-cut process when die line is...

See more

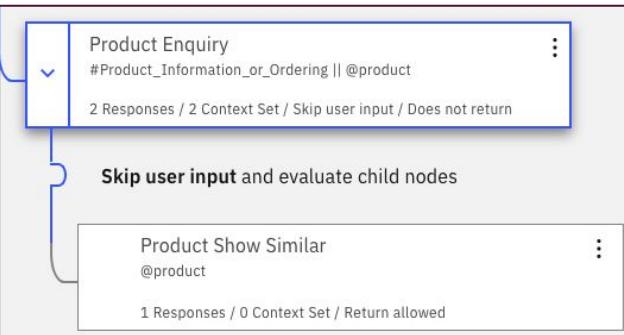
See more ▾

Did I Answer your question?

nope

Confirmation

Dynamic Data Retrieval using Webhooks



If assistant recognizes

@product +

Then call out to my webhook Learn more

Parameters

Key	Value
product	"\$product"

Add parameter +

Return variable

webhook_result_1

✓ **Webhook URL** Your webhook URL is configured. [Options](#) ×

Thank you for your enquiry. Please click on this link to view information and place orders for business-card:
<https://www.expressprint.com.sg/product/business-card>

If that does not meet your needs, please feel free to look at these related products in our catalog:

Select an option ^

- Business Card (Die-Cut)
- Folded Business Card
- Business Card (Express)
- Business Card (Standard)
- Business Card Holder

Dynamic Data Retrieval using Search Skill



Knowledge Base FAQ Enquiry
#Product_or_KnowledgeBase_Common_Questions

3 Responses / 2 Context Set / Does not return

If assistant recognizes
#Product_or_KnowledgeBase_Common_Questions

Assistant responds

	If assistant recognizes	Respond with	Finally
1	@product	Enter a response	Jump
2	@faq	Search skill	Jump
3	true	Search skill	Jump

show me information about lamination

I searched my knowledge base and found this information which might be useful:

Lamination | Singapore printing serv...

Common types of *laminate* are gloss, matt. Previous How to request for pricing / quotation? Next Round Corner Post navigation ← Previous Knowledge Base - Article Next Knowledge Base - Article → Leave a...

[See more](#)

[See more](#)

Is your query resolved?

Watson Assistant Training & Testing

installment?

Did you mean:

- Anything Else or Questions We Can't Understand
- Orders Status / Change / Delivery Enquiry
- Interfacing to Email or Live Chat
- Payment Enquiry
- None of the above

Payment Enquiry

Stage 1: PrintBot doesn't recognise question

installment?

#Payment_Method

Did you mean:

- Anything Else or Questions We Can't Understand
- Orders Status / Change / Delivery Enquiry
- Interfacing to Email or Live Chat
- Payment Enquiry
- None of the above

Hello, Ms Yong! Thanks for visiting Expressprint. Please feel free to ask me a question.

installment?

#Goodbye

Did you mean:

- Anything Else or Questions We Can't Understand
- Orders Status / Change / Delivery Enquiry
- Interfacing to Email or Live Chat
- Payment Enquiry
- None of the above

Stage 2: Tracking error

Stage 3: Changed Intent

Please choose one of the options below, :

I'm from a Government Agency

I wish to make an online order

I'm ordering for my company and need an invoice for Accounts to make payments

Stage 4: Problem Resolved

Watson Discovery Data Source & Training

tell me more about hot stamp

I searched my knowledge base and found this information which might be useful:

Request for Quotation | Singapore pri...

* Description of quote* Tell us as detailed as possible. Include information such as Quantity, Delivery date, Payment terms, etc.

[See more](#)

Money Packet Printing Singapore - Ex...

Hot Stamping Note: 1. Important Image/Text to be hot stamped must be within Hot Stamping Safe Zone. 2. Please use our Product Size Template to ensure you prepare your artwork correctly. 3....

[See more](#)

BEFORE

hotstamping

Rate some documents as relevant or not relevant results for this query. [Learn more](#).

Hot Stamp / Foil Stamp | Singapore printing services

[View document](#)

... https://media.expressprint.com.sg/uploads/2017/10/Hotstamp-300x208.jpg 300w" width="600"></div> </article> </div> </div> </div> </div> </div> </body> </html> ...

Relevant

Not relevant

TRAINING

The screenshot shows the IBM Watson Discovery interface. At the top, there's a navigation bar with 'IBM Watson Discovery', 'ExpressPrint Website Documents / Build queries', 'Watson Discovery-fc', 'Instance: Watson Discovery-fc', and a 'Train Watson to improve results' button. Below the navigation is a search bar with 'Search for documents' and options 'Use natural language' and 'Use the Discovery Query Language'. A search term 'hotstamping' is entered. To the right of the search bar are two tabs: 'Summary' (selected) and 'JSON'. Under the 'Summary' tab, it says 'Showing 2 of 2 matching documents' and lists two items: 'Hot Stamp / Foil Stamp | Singapore printing services' and 'Acceptable Print Policy: print products, offset, digital, large format printing'. A pink oval highlights the 'JSON' tab.

tell me more about hotstamping

I searched my knowledge base and found this information which might be useful:

Hot Stamp / Foil Stamp | Singapore p...

Created On 10/10/2017 by Welson Ang *Hot/foil stamping* uses high temperatures to transfer foils onto the card's surface via a metal mold. *Foil* colour available: Gold, Silver, Black, Red, Blue, Green See...

[See more](#)

[See more](#)

Are you satisfied with the answer?

AFTER

Acceptable Print Policy: print products, offset, digital, large format printing

[View document](#)

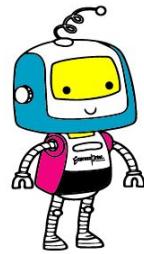
... Quality for reprint if: - More than 10% colour difference (Basis of colour check based on our CMYK Colour Reference Book) SPOT UV REGISTRATION (INCLUDES HOTSTAMP, DIECUT AND EMBOSSED) Quality for reprint if: - Effect of positioning is more than 0.5mm DIRTY SPOTS 1 dirty spot within 5cm² is deemed acceptable if the dirt spot is less than 0.5mm diameter. ...

... Quality for reprint if: -</p> More than 10% colour difference (Basis of colour check based on our CMYK Colour Reference Book) <h2>SPOT UV REGISTRATION</h2> (INCLUDES HOTSTAMP, DIECUT AND EMBOSSED)</h2> <p>

Show more

Relevant

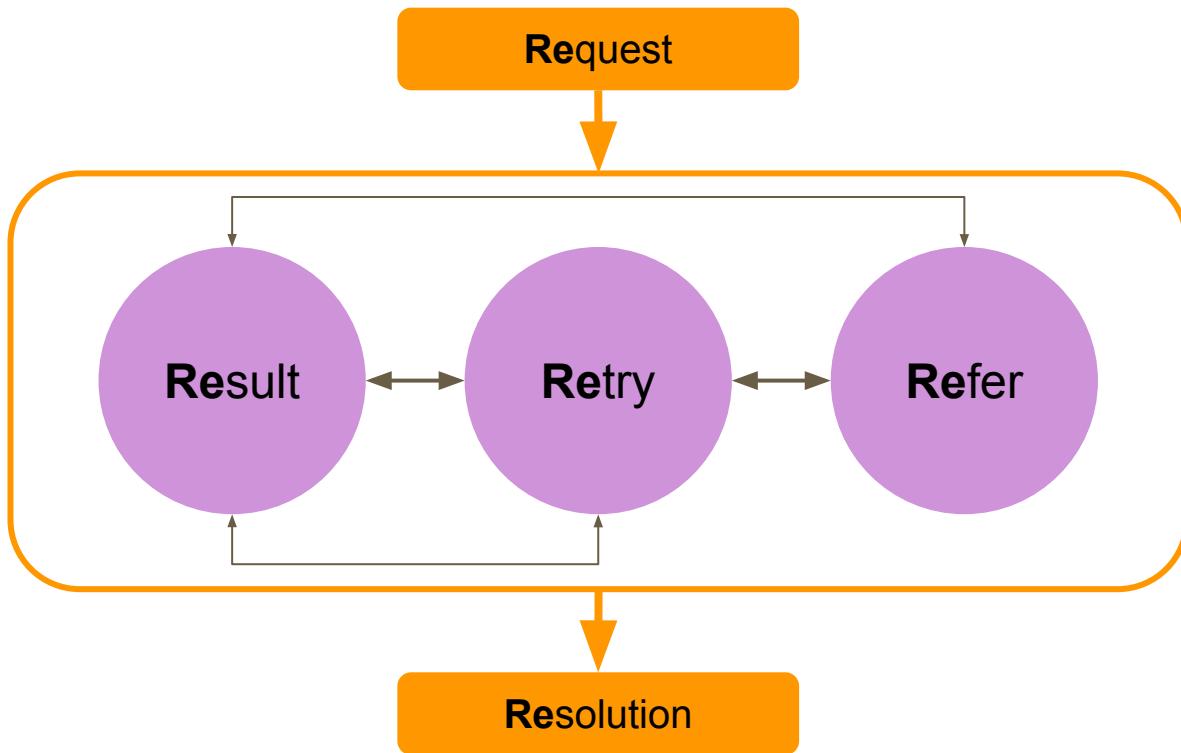
Not relevant

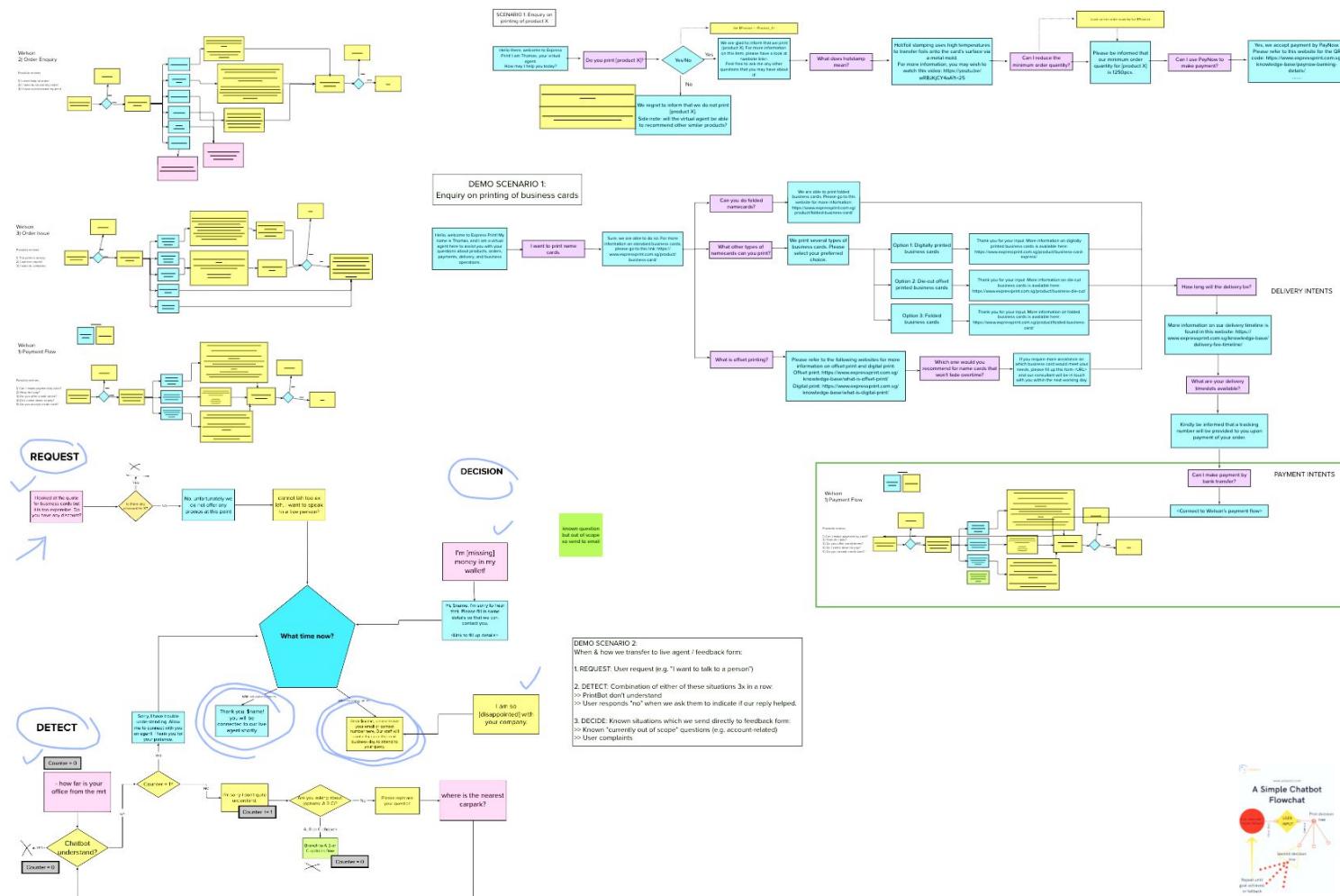


Live PrintBot Demo



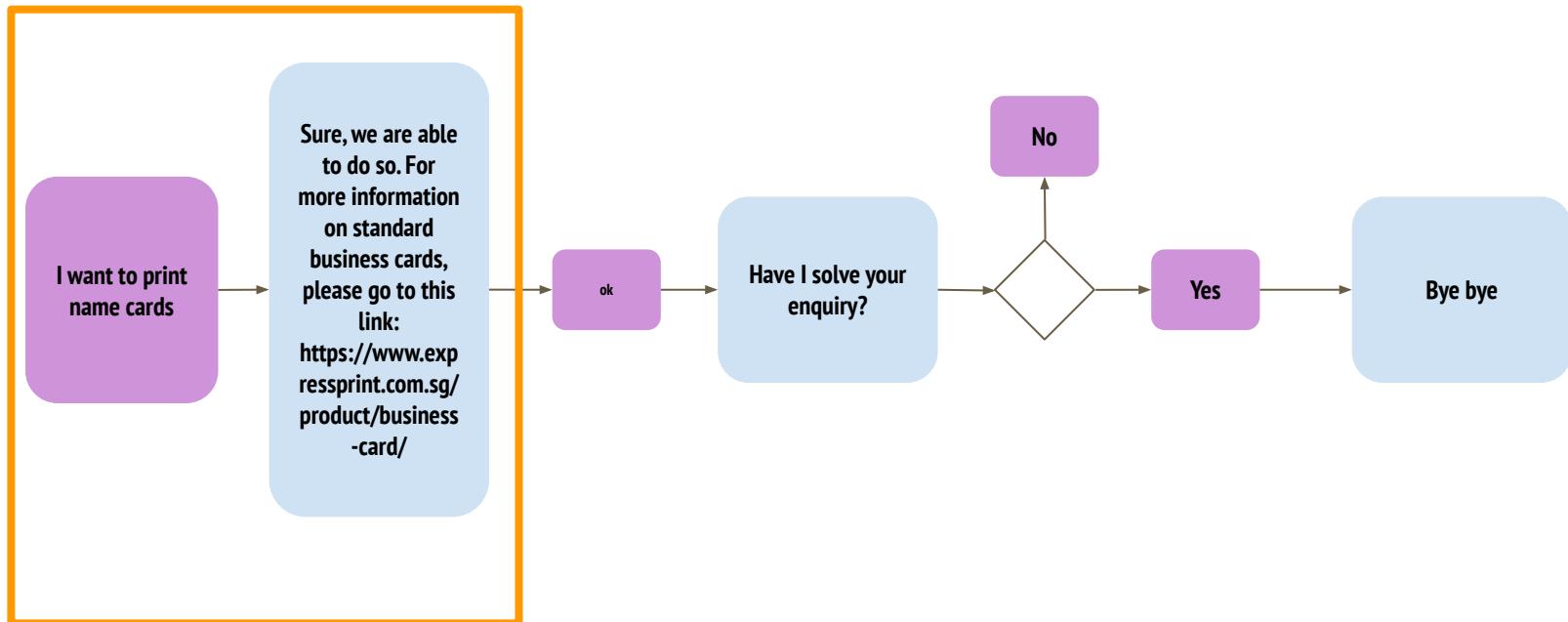
Flow Conversation Design | 5 Re's Structure





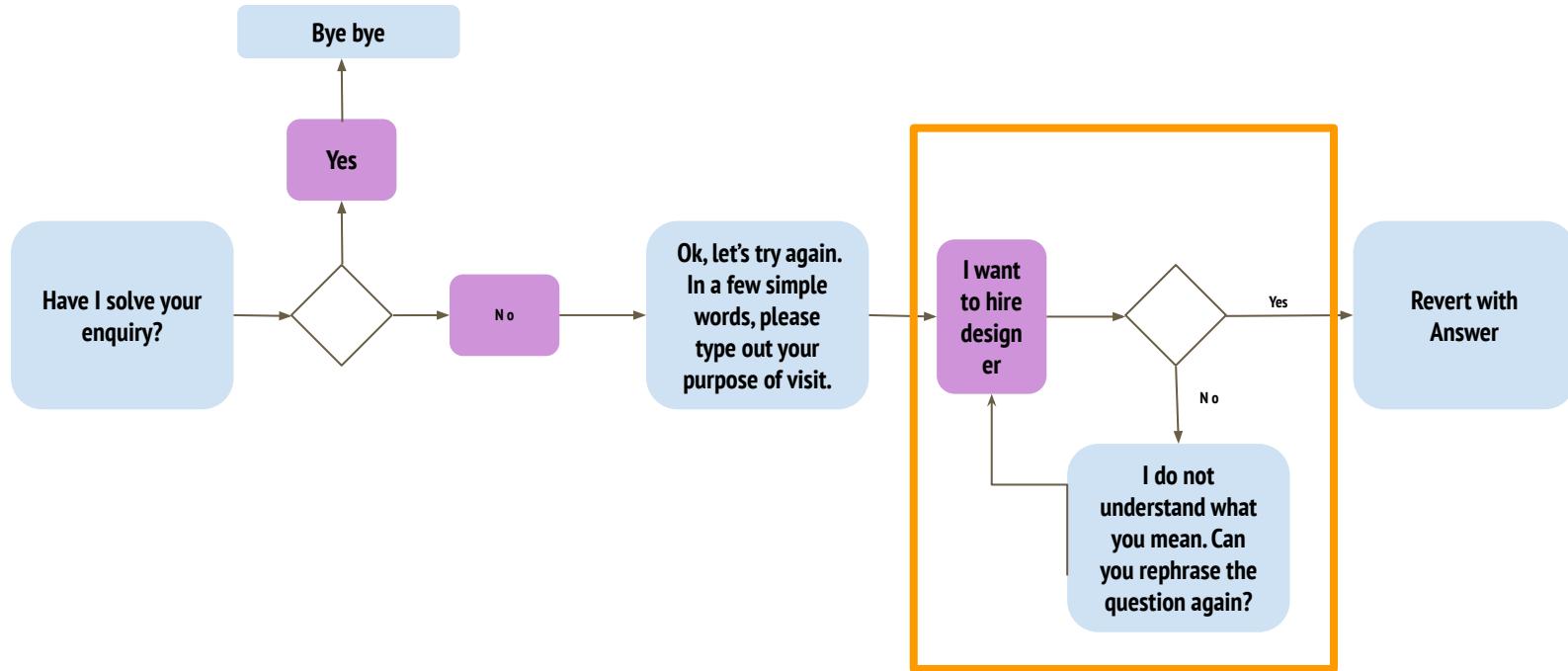
Flow Conversation Design | Example 1/3

Request



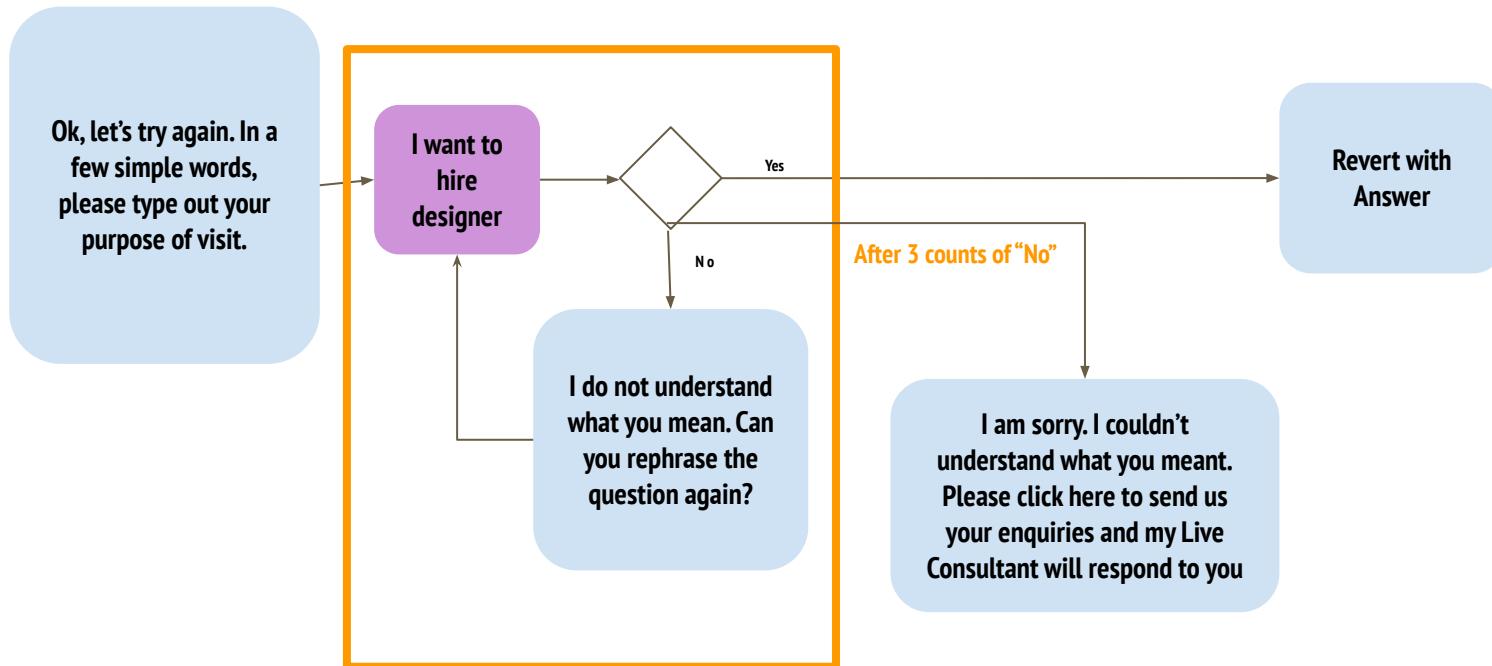
Flow Conversation Design | Example 2/3

Retry



Flow Conversation Design | Example 3/3

Refer



Flow Conversation Design | Watson Assistant

PrintBot Skill Version: Development

Intents

Entities ^

- My Entities
- System Entities

Dialog

Options ^

- Webhooks
- Disambiguation
- Autocorrection
- Intent Detection

Analytics ^

- Overview
- Autolearning
- User conversations

Versions

Content Catalog

Intents (17) ↑

- #Customer_Care_Store_Hours
- #Customer_Care_Store_Location
- #Customer_Complain
- #Customer_Request
- #Delivery_Self_Collect
- #Delivery_Self_Courier
- #Delivery_Timeline_Fees
- #Delivery_Timeslots
- #General_Greetings
- #Goodbye
- #Order_Issues
- #Order_Status_and_Delivery_Enquiries
- #Payment_Method
- #Product_Information_or_Ordering
- #Product_or_KnowledgeBase_Common_Questions
- #Question_Out_Of_Chatbot_Scope
- #Thanks

PrintBot Skill Version: Development

Intents

Entities ^

My Entities

System Entities

Dialog

Options ^

- Webhooks
- Disambiguation
- Autocorrection
- Intent Detection

Analytics ^

- Overview
- Autolearning
- User conversations

Versions

Content Catalog

Entity (8) ↑

- @faq
- @order_enquiry_options
- @order_issue_options
- @payment_category
- @policies_non-kb
- @product
- @product-category
- @reply

PrintBot Skill Version: Development

Add node Add child node Add folder

Intents

Entities ^

My Entities

System Entities

Dialog

Options ^

- Webhooks
- Disambiguation
- Autocorrection
- Intent Detection

Analytics ^

- Overview
- Autolearning
- User conversations

Versions

Content Catalog

Opening welcome

1 Responses / 3 Context Set / Does not return

#General_Greetings

4 Responses / 0 Context Set / Does not return

Product Enquiry

#Product_Information_or_Ordering || @product

2 Responses / 2 Context Set / Skip user input / Does not r...

Knowledge Base FAQ Enquiry

#Product_or_KnowledgeBase_Common_Questions

4 Responses / 2 Context Set / Does not return

Delivery Related Enquiries

#Delivery_Timeline_Fees || #Delivery_Self_Collect || #De...

1 Responses / 1 Context Set / Jump to / Does not return

Delivery Timeslot Enquiry

#Delivery_Timeslots

1 Responses / 1 Context Set / Jump to / Does not return

Payment Enquiry

#Payment_Method

1 Responses / 0 Context Set / Does not return

Orders Status / Change / Delivery Enquiry

#Order_Status_and_Delivery_Enquiries

1 Responses / 0 Context Set / Does not return

Order Issues

#Order_Issues

1 Responses / 0 Context Set / Does not return

Integration and Deployment

Style Launcher Home screen Live agent Suggestions Security **Embed**

</> Embed on your website

Ready to launch? It's as easy as copy and paste. [Learn more](#)

```
<script>
  window.watsonAssistantChatOptions = {
    integrationID: "709c79ed-ffb0-4845-9248-838523eee224", // The ID of this integration.
    region: "us-south", // The region your integration is hosted in.
    serviceInstanceId: "8d13096d-21ed-4bdf-9600-882045e8086d", // The ID of your service instance.
    onLoad: function(instance) { instance.render(); }
  };
  setTimeout(function(){
    const t=document.createElement('script');
    t.src="https://web-chat.global.assistant.watson.appdomain.cloud/versions/" + (window.watsonAssistantChatOptions.integrationID);
    document.head.appendChild(t);
  });
</script>
```

Live Demo

The screenshot shows a web browser displaying the ExpressPrint website. The page has a yellow header bar with the text "Direct Factory Printing Price." and "Best seller: Business Card, Stickers, Documents". Below the header is a navigation bar with links like "All Products", "Business Cards", "Stationery & Letterhead", etc. A search bar and a user account icon are also present.

The main content area features a large image of a hand holding a business card with the name "PAUL ROBINS" and "GENERAL MANAGER". To the left of the image, the text "Create Your Unique Professional Identity" and "Best value for Business Card" is displayed, along with a "SHOP MARKETING MATERIALS" button.

At the bottom of the main content area, there are five service icons: "FREE SHIPPING Above \$50!", "PRINT ON-TIME Else Moneyback*", "SECURE PAYMENT 100% secure payment", and "24/7 SUPPORT Dedicated Support".

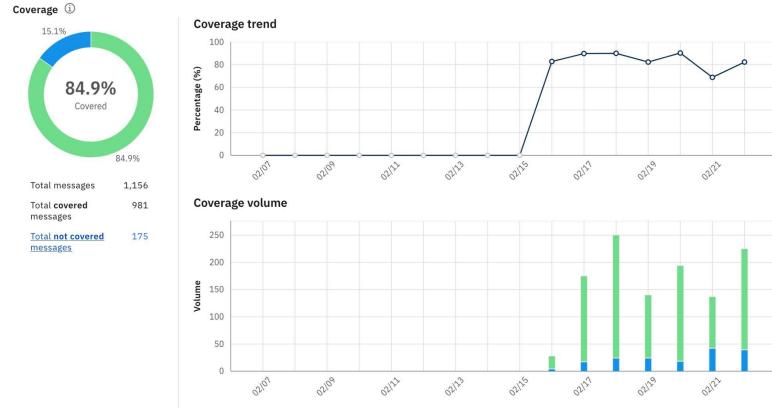
A prominent feature on the right side is a white pop-up window titled "Watson Assistant". It contains a message from "PrintBot" introducing itself as a 24x7 virtual consultant available to help with questions about products and services, order delivery, and payment. It also asks how the user would like to be addressed. The window includes a text input field labeled "Type something..." and a note at the bottom stating "Built with IBM Watson®".

Next Step



Performance Tracking & Ongoing Training

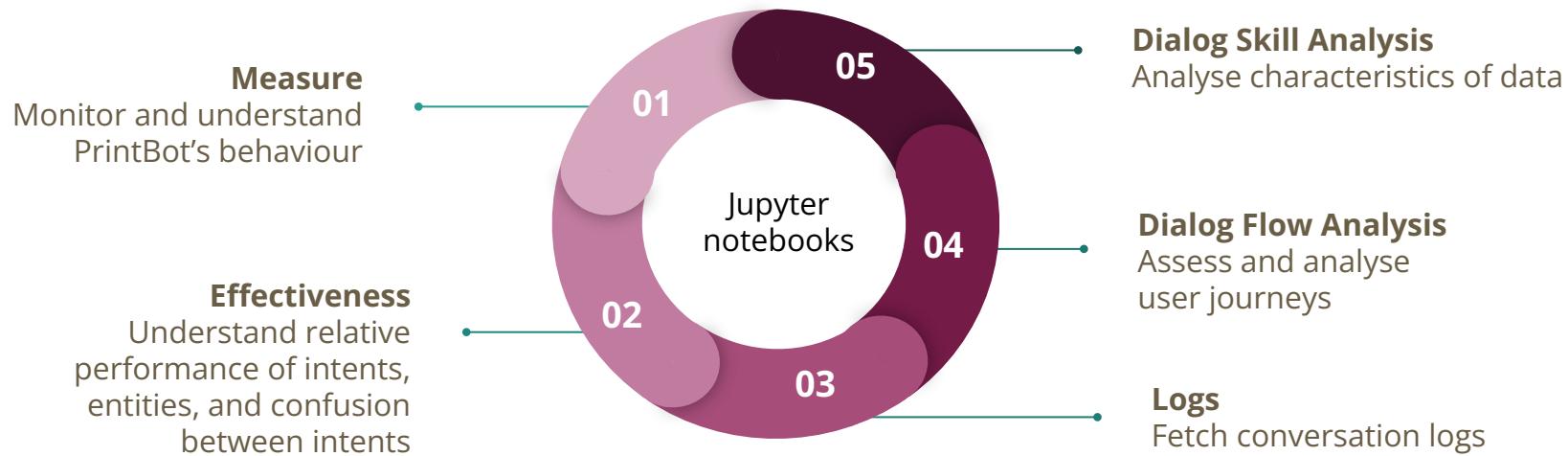
- Metrics overview in Watson Assistant - grasp PrintBot's confidence level and learn more about the most frequent customer enquiries



Top intents	Total	Top entities	Total
#Product_Information_or_Ordering	103	@product	179
#Product_Place_Order	95	@faq	103
#Goodbye	87	@reply	81
#Product_or_KnowledgeBase_Common_Questions	49	@payment_category	19
#Payment_Method	45	@order_enquiry_options	15
#Customer_Care_Store_Location	39	@payment_gov_agency	8
#Order_Status_and_Delivery_Enquiries	37	@payment_group	6
#Delivery_Timeline_Fees	30	@order_issue_options	5
#General_Greetings	25	@sys-date	4
#Customer_Care_Store_Hours	24	@payment_online	2

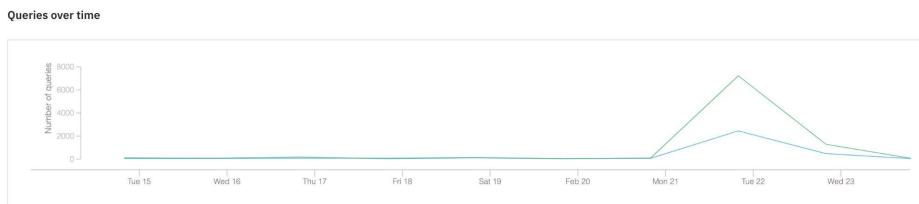
Performance Tracking & Ongoing Training

- IBM Watson Assistant Continuous Improvement Best Practices - for measuring, analysing, and actively improving PrintBot continuously



Performance Tracking & Ongoing Training

- Performance dashboard in Watson Discovery - review queries performed and retrain by bringing relevant results to the top



Fix queries with no results by adding more data

Queries with no results

html:""

no

What is hooterhot

[View all and add data](#)

Bring relevant results to the top by training your data

Most recent queries

Paul

business card

mask holder

[View all and perform relevancy training](#)



Future Enhancements

Goals for "AnimalB" - MVP 1.0

- Provide 24/7 customer support
- Reduce customer frustration due to slow replies
- Enable human consultants to focus more on other aspects of Expressprint's business operations

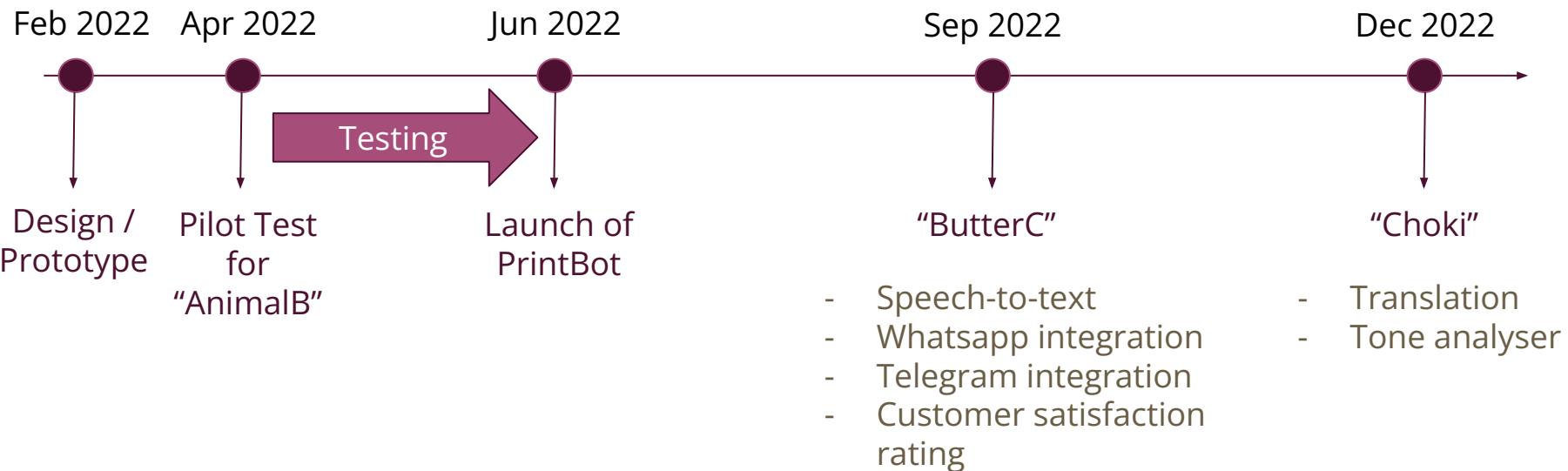
Future Goals for "ButterC" - MVP 2.0

- Bring more accessibility to customers that need assistance while on the move
- Cater for further convenience through chat platforms
- Measure customer satisfaction from using of virtual agent to improve performance

Future Goals for "Choki" - MVP 3.0

- Facilitate multi-linguistic conversations for improved understanding of customers' purchasing needs
- Understand customers' psychological frame of mind so human consultants are better equipped to handle them

MVP Roadmap



Project Learnings



Constraints and Challenges

- Personal matters arising from COVID situation
- Knowledge gaps in Watson Assistant and Watson Discovery
- Limitations of resources accessible in IBM Cloud (for Lite plan)
- Unable to use Smart Document Understanding on web-crawl data
- Occasional unexpected Watson Assistant behaviour
- Unfamiliar working method when using Watson Assistant



Personal Takeaways

Collaboration
among team
members

Annie

Fail fast, fail
cheap

Niithiya

Given the right
environment and
tools, people want
to do a good job

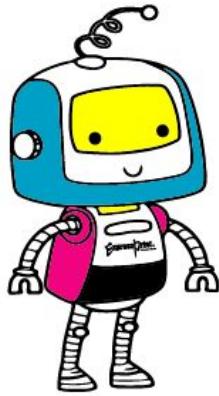
Kwang Meng

Team synergy
does wonders!

Loretta

Time
Management

Welson



PrintBot

Q&A... Transferring you to LIVE team