

Assignment 2

Effective Configuration of Research

You work for a large IT consultancy that works in many different sectors, and provides many services in house (such as customer support, business planning, asset management etc). You have recently been on a project to help a large green energy company select an off-the-shelf client relationship management system (CRM). By going through this process you have realised that your own company's system can be significantly improved, however it's an old system that has gone through many iterations, so it is not clear where or how changes should be made to improve both the efficiency and usability of the current system. Your manager is supportive of a project to re-develop the internal CRM, however before committing significant resources, they (as the client) require more specific information on where to target the effort, and which part of the business to concentrate on first.

Define what you consider the three main research questions that need to be answered in the course of your conducting this consultancy project

1. Where are the current bottlenecks and challenges within the existing CRM system?
2. What specific features are necessary in the new CRM system to improve different departments' unique needs?
3. How can the transition to a new CRM system be managed smoothly?
4. What are the costing savings if there migration to the re-developed internal CRM were to be performed

Describe how qualitative and quantitative methods will be used to answer these questions and draw out the best findings for your client outlining existing data and that which requires collection. (limit 300 words)

Qualitative Methods:

- First Question We need to understand the departments view on what challenges are currently there with the existing internal CRM. To achieve this a survey can be performed and interviews can be conducted a selected few numbers of people. On site visits and see how different departments utilise the internal CRM would also be useful. Unstructured interviews with stakeholders from different department would allow a broader depth to be revealed.

To assess the qualitative aspect of the questions, such as identifying the number of challenges, we can create a survey in the form of an online questionnaire. This survey can be conveniently distributed via email to all potential users from different departments. As an incentive, participants could be offered the chance to win gift cards through a draw. Challenges and things can be tallied so quantitative analysis of the current CRM data will facilitate the identification of patterns and trends in inefficiencies.

- Second question A detailed requirement gathering can be conducted through workshops and surveys to gather qualitative understanding and needs for stakeholders from various departments. Quantitative methods such as online surveys, can be used to identify usage patterns from the current CRM system and potential impacts if the new CRM system were to be introduced.

- Third question A detail analysis of the existing system and code would be required to understand the dependencies required for redeveloping the CRM system. Relevant stakeholders and engineerings also to be asked via meeting or interviews to devise a contingency plans and rollback plans in case the rollout is unsuccessful to production.

A roadmap and quantitative predictive analysis will be created to detail a potential timeline and resource allocations when part of the systems are changed to use the new CRM.

During the transition phase, qualitative feedback through canary releases, pilot testing to fine-tune the transition strategies can be employed to ensure that there are no problems.

Describe the resources you expect to be necessary, considering time, money and expertise, breaking this down into key activities that will be required.(limit 300 words)

Activity 1: Information and Data Gathering

Relevant stakes and subject matter experts from the part of the existing system should be pulled together and hold a meeting or form a panel of interview to understand the amount of effort that is needed to redeveloped the CRM.

Activity 2: Solution Architecture Creation

A possible architecture of the system the involves the redeveloped CRM should be created to inform decisions on amount of resources to be allocation to each part of the implement and also shed light on the the cost. This can be created by analysing the existing code of the system and examining documentations detailing the existing architecture. Also meetings and interviews with subject matter experts when unresolved questions arises.

This stage could also happen after recruitment in order to involve new recruits in the loop.

Activity 3: Recruitment

Roles and responsibilities need to be defined in the recruitment phase by identifying certain skills that is required to redevelop the new CRM system. The HR team should be notified of these skills and screening and interview process to assess suitable candidates should commence. Onboarding and training process of new recruits should be also be carefully planned and considered.

Activity 4: Roadmap

Following the research, a detailed plan outlining the development roadmap be drafted. A team with project managers, business analysts, and IT specialists will be assembled. This phase demands a substantial financial commitment to ensure the recruitment of skilled personnel and the acquisition of necessary technology infrastructure.

Activity 5: Implementation

Finally, in the implementation phase, structured training programs to facilitate smooth transitions, entailing time and financial resources to develop training materials and conduct workshops. Also daily standups within teams should be held and weekly technical showcases should be held where each team nominates a person to detail what are the new changes they have created in their development teams.

Activity 6: Follow Up and Report

After the CRM is redeveloped and deploy into production. Follow ups need to be made to ensure that there is no bugs or issues with the system. During the initial weeks following deployment, continuous monitoring should be in place to identify any system bugs or inefficiencies immediately. This involves setting up automated tracking tools that can promptly detect and report issues.

It is essential to solicit feedback from the end-users who interact with the system daily. This could be facilitated through online surveys or feedback forms integrated within the CRM system, allowing users to report any issues or suggest improvements.

Activity	Resource	Time Required	Volume/Amount	Cost
Information and Data Gathering	Relevant stakeholders, subject matter experts, existing documentation	2 weeks	20 people	\$11000
Solution Architecture Creation	Subject matter experts, solution architects, data storage and management tools	2 weeks	10 people	\$5500
Recruitment	Human resources team, IT specialists for screening	1 month	10 people	\$10000
Roadmap Creation	All domain experts, roadmap creating tools, collaboration tools, solution architecture data, data collected	1 week	20 people	\$5500
Implementation	All IT specialists, product managers, code repository, devops, scrum masters if agile methodology is used, project management tools, issue tracking and bug tracking tools	6 months - 1 year	30 people	\$2.5m
Follow Up and Report	All IT specialists, product managers, scrum master, customer support team, finance team, project management tools, issue tracking tools, bug tracking tools	1 year - 2 years	60 people	\$1.0m

How is cost calculated?

- By considering the following:
 - Salary of employees
 - Cost of tools
 - Cost of resources

Critique and development of a questionnaire

Question	Issue Identified	Suggested improvement
<p>P2, Q2:</p> <p>"Since every IT student knows Python, how would you rate your expertise in it?"</p>	<p>Leading Question, Loaded Question, Prestige bias, ambiguous</p> <p>The phrase "every IT students knows python" suggests that the person asked should know it need and need to rate it.</p> <p>It is also ambiguous since python is such a broad topic which encompasses data science, REST apis, oop, concurrency etc. Some people might be better at different aspects parts of the language.</p>	<p>Remove the unnecessary part of the question causing it to become a leading question.</p> <p>Also don't assume the person you are asking already knows python.</p> <p>"Do you know how to program in python?"</p> <p>"If yes what do you do with python?"</p> <ol style="list-style-type: none"> 1. Data science 2. REST apis 3. CLI applications 4. etc <p>"how would you rate your expertise in Python?"</p>
<p>P2 Q5:</p> <p>"Why do you think some students avoid specialising in the obviously lucrative field of data science?"</p>	<p>Prestige Bias and Loaded Question</p> <p>The adjective "lucrative" has a very positive connotation and is hinting to the person being asked it would be absurd if his opinion is different.</p> <p>The word "avoid" also carries an assumption that students are avoiding data science which may not be correct.</p>	<p>* Remove the adjective "lucrative".</p> <p>* Remove the word "avoid" to avoid generalisations.</p> <p>"What do you think are some reasons that students might choose not to specialise in data science?"</p>
<p>P2 Q5:</p> <p>"On a scale from 1 to 5, how proficient are you in handling</p>	<p>Poor Answer Scale Options, Technical Terms/Jargon, ambiguous</p>	<p>* Simplify the question and provide a brief explanation of the technical terms,</p> <p>* Remove the scale completely</p>

and mitigating stack buffer overflows in legacy systems?"	<p>The person being asked this question may not be capable of knowing what stack buffer overflow is. Also it is not clear what a rating of 5 would mean? It is very subject in that some people may rate themselves as 5.</p> <p>It is also very ambiguous what the question means by legacy systems since it could be many things. Also which language is the question referring to for stack buffer overflows since most high level languages are memory safe.</p>	<p>and ask more in depth questions.</p> <p>* Break the question down into multiple questions so it clearer to the person being asked.</p> <p>"Do you know C programming language?"</p> <p>"What techniques are there in secure coding practices in the C programming language do you know?"</p> <p>"Do know know any techniques handling and preventing errors in older computer systems (such as stack buffer overflows)?"</p>
"Popular opinions suggest that blockchain and quantum computing are the future. How prepared and excited are you for these inevitable changes?"	<p>Double barred question, poor answer scale options, ambiguous, leading question, loaded question</p> <p>The question is inherently double barred because the person being asked need to answer for both topics.</p> <p>The question is ambiguous because it does not tell the person being asked what aspect of their lives would be impacted. Why would the user be excited?</p> <p>The question due to the word "excited" because the person being asked may hold a different view or emotion in regards to block chain and quantum computing.</p> <p>The answer scale for "excited" does not make a lot of sense since the different prepared and excited and very prepared and excited seem very vague and trivial.</p>	<p>* Separate the question into two distinct questions, each addressing one aspect (preparedness and excitement).</p> <p>* Remove the scale and incorporate only yes no or no answer so user can more easily give an answer.</p> <p>"Do you feel for the potential changes brought about by developments in blockchain?"</p> <p>* Yes</p> <p>* No</p> <p>* Don't have an answer</p> <p>"Do you feel for the potential changes brought about by developments in quantum computing?"</p> <p>* Yes</p> <p>* No</p> <p>* Don't have an answer</p> <p>"Are you excited about the potential changes brought about by developments in blockchain?"</p> <p>* Yes</p> <p>* No</p> <p>* Don't have an answer</p>

		<p>"Are you excited about the potential changes brought about by developments in quantum computing?"</p> <p>* Yes</p> <p>* No</p> <p>* Don't have an answer</p>
--	--	---

Question	Justification
<p>Which platforms or resources do you frequently use to improve your IT skills?</p> <p>* University Courses</p> <p>* Online MOOCs (Coursera, Udemy, etc.)</p> <p>* YouTube Tutorials</p> <p>* Community Workshops/Hackathons</p> <p>* Self-study through Books and Documentation</p> <p>* Other</p>	<p>This question helps with determining the most common platforms/resources students use to learn IT skills, emphasising their adaptability and learning preferences in the ever-changing IT field.</p>
<p>"In your opinion, is your current curriculum adequately preparing you for advancements in technologies like blockchain and quantum computing?"</p> <p>* Yes, sufficiently</p> <p>* Somewhat, but it could use some updates</p> <p>* No, it's quite behind on these fronts</p> <p>* Unsure</p>	<p>This question facilitates in understanding the students' views on the effectiveness of their curriculum in helping them for emerging technologies. This allows the university to identify areas for curriculum development.</p>
<p>"Post-graduation, how do you intend to keep up with the constant evolution in the IT sector?"</p> <p>* Engaging in continuous learning through online platforms</p> <p>* Attending workshops and conferences</p> <p>* Joining communities and networks in the IT sector</p> <p>* Pursuing further studies or specializations</p> <p>* Other</p>	<p>This question sheds light on students' foresight and planning in staying updated within their field post-graduation. This can indicate their readiness for the dynamic IT career landscape and their motivation levels after being exposed to course contents.</p>
<p>"Have you undertaken any projects or internships focusing on emerging technologies? If yes, please describe briefly."</p>	<p>This open-ended question could potentially collect insightful information on the practical experiences students have had with new technologies. This potentially highlighting the depth of their hands-on engagement during their time at uni.</p>

Interviews and Focus Groups: Planning and conducting an interview

Task 1: Interview Schedule

Strategy

When finding the interviewee digressing to a different topic immediately ask a question from a different section to get them back on track

Introduction (5 minutes)

1. Thanks Interviewee for coming
2. Introduce interviewee.
3. Strike a casual conversation to not make the interviewee nervous.

Lead in questions (3 minutes)

What are the most common platforms that you use to view digital content?

What are the visible changes to your daily content consumption habits since you started using those platforms?

Apart from your phone, what other devices would you use to view digital content?

Do you find that you use over the more often?

What activities would do if you cannot access your devices to view any digital content?

What other forms of digital content do you think we kind of see with the devices we have today?

Effects of devices and Collective Consciousness (5 minutes)

How do you manage the challenge of not being distracted by digital devices?

How has the accessibility of digital content on various devices influenced your preferences or certain types of content?

Do you feel like you have free rein or in control over when to use your devices?

Do you believe we, as a society, are subjected to conformity with devices and technology and influencing us to like certain things?

If you didn't have any jokes from social media and you met someone in real life that has no any memes or things to pick up on the internet how would you interact with this person?

Do you believe to any extent that your personality could be in fact shaped by the use of digital content and also your digital devices?

Do you believe that your personality is in fact influenced by what you perceived from digital content?

Is there a generation gap in terms of how you handle and use devices for viewing digital content?

If so, are there any barriers with relating to and communicating with your parents?

Privacy Issues (5 minutes)

Has multi-device content access influenced your perception of privacy and security regarding digital entertainment?

Are you worried that digital content providers may collect your data to train their AI models?

Do you think it is right that digital content providers are showing you ads based on your data?

What are your parents' views on your use of your devices to access digital content?

Do you feel like that your spending habits are affected by the digital content that you view?

Has viewing digital content influenced you in any way to go to certain places or venues in real life?

How do you decide which device to use for those different types of digital content? Do you have a preference to use one on a different device than another?

Do you find digital content online to be distracting?

What strategies do you have in place to help you not get distracted from viewing one content over another?

Digital Detox (4 minutes)

Do you know what is digital detox?

What would be the ideal day for you when you are on digital detox?

Closing (3 minutes)

Do you have any final thoughts or comments you would like to add?

This basically wraps up everything we need to talk about in this interview. Thanks for the joining us.

Task 2: Interview Smart Transcription

Interviewer: I did the deal with the experience with digital entertainment. Your honesty and insights will be valuable. To start off, let's introduce Lulu. Lulu is a Bachelor of Science student at Monash University, currently 19 years old. Our first question: what are the most common platforms that you use to view digital content?

Lulu: The most common platforms I use are social media platforms on my phone, like YouTube, Instagram, and maybe even TikTok. Apart from that, I also watch the news on my TV or enjoy movies at the cinema.

Interviewer: Interesting. Have you noticed any significant changes in your daily content consumption habits since you started using these platforms?

Lulu: Yes, I find myself spending more time in bed, browsing on my phone. Although it might not be the healthiest habit, I've noticed that I use my phone to pass time during train rides, where I used to engage in other activities.

Interviewer: Apart from your phone, what other devices do you use to view digital content?

Lulu: I also use my TV and MacBook, but those are the primary ones.

Interviewer: Do you find yourself using one device more than others for accessing digital content? Could you elaborate on why that is?

Lulu: Definitely my phone. It's easy to access, and I can use it in public without any hassle, which isn't the case with my MacBook. Next would be my MacBook, followed by my TV.

Interviewer: In a hypothetical scenario where phones disappear from the face of the planet, would your MacBook suffice as a substitute?

Lulu: If my phone vanished, yes, my MacBook would take its place, and I might even consider purchasing an iPad to replace it.

Interviewer: How do you manage your time between different devices, and what activities do you engage in when not using any of them?

Lulu: When I'm not using any devices, I'm either attending class, doing homework, sleeping, eating, or enjoying various other activities like doing my makeup, hanging out with friends, shopping, or cooking for my family.

Interviewer: Given your usage of multiple devices, how do you prevent distractions during important tasks?

Lulu: It's a challenge, as devices can be quite distracting. However, if what I'm doing is more engaging than using my phone, I tend to stick with it. When responsibilities pile up or after extended device usage, I feel a need to be more productive and reduce my screen time.

Interviewer: How has the accessibility of digital content on various devices influenced your content preferences, such as videos, games, and music?

Lulu: The easier it is to access content, the more likely I am to engage with it. Conversations with friends or social media discussions about certain content can also influence my choices.

Interviewer: Do you feel that this ease of access might influence your preferences to align more with the popular opinion?

Lulu: Partially, yes. While I can learn about trends through personal interactions, digital platforms certainly make it easier to discover new things, possibly guiding my choices based on popular trends.

Interviewer: As a society, do you think we are more prone to conforming due to the influence of technology and devices?

Lulu: I believe it's a matter of human psychology and behavior. People tend to be influenced by popular opinions within their group, which can foster a sense of conformity.

Interviewer: Moving onto a different aspect, has the multi-device accessibility impacted your perceptions of privacy and security concerning digital entertainment?

Lulu: Although I notice that platforms might track my preferences through ads and algorithms, I'm not overly concerned as long as my personal life isn't invaded. I don't mind platforms knowing my preferences for things like makeup or outfits.

Interviewer: Are you worried that the collected data might influence your spending habits by showing personalized ads?

Lulu: While it's possible that the ads might influence some people's buying habits, I don't think they have a full influence on my spending habits.

Interviewer: Can you describe any real-life experiences where multi-device accessibility has positively impacted your social interactions and connections?

Lulu: Absolutely. Many aspects of humor and social interactions nowadays are influenced by trends on social media platforms. This has helped me relate to others, understand their interests, and even share a laugh over memes or trending topics.

Interviewer: How would you interact with someone who isn't familiar with internet trends or memes?

Lulu: Although internet content influences parts of my personality, I believe I can still connect with someone who isn't into internet trends. Our sense of humor might differ, but I think we could still be friends and get along well.

Interviewer: To what extent do you believe your personality is shaped by digital content and device usage?

Lulu: While my sense of humor and some interests are influenced by the internet, it doesn't define my entire personality. It's a part of who I am, but not the whole.

Interviewer: Well in a way, I like to admit that probably not picked up from social media but in a way, I do feel like lots of people who are on social media, the sense of humour is picked up from it and there's no doubt about that. But in a way sometimes I pick up, I feel people not just me pick up the sense of humour from people around them as well. By picking up from people around them, it's not directly from social media but it also may be like they've picked it up from social media, not me. What are your parents' views on your use of your devices to access digital content? Do you think that you can still relate to your parents and can your parents relate back to you since there's a generation gap in terms of how you handle and use devices for viewing digital content?

Lulu: Coming from a family of Asian parents, I feel like yes, there's definitely a gap between us and the sense of humour is quite different but that doesn't mean that we just can't make each other laugh, can't have a good time together because obviously our personality of who we are aren't fully built on social media because we might pick up behaviours from other people not just social media. My parents, they've actually used social media quite a bit despite them being much older and different generation. It might be harder to tell them Gen Z jokes without them being like huh, what but yeah other than that I still think I can get along with them and have a great time.

Interviewer: Yeah, that's a great answer. So let's continue with a different question. Since we've mentioned social media a lot, what other forms of digital content do you think we kind of see with the devices we have today?

Lulu: Apart from social media which we've been talking about a lot, there definitely could be other platforms and other forms of entertainment whether it's things like music, Spotify, iTunes and things like that or video games which I know a lot of people like. And then Shana Mus which is like watching movies, sometimes even though sliding billboards that show ads yeah but that's about all I can think of.

Interviewer: So do you think that your viewing of digital content, for example, ads, cinemas, or billboards, do you think those experiences are very different to what you're experiencing on the phone?

Lulu: Definitely, although I do feel like things that I see on cinema cinemas and on billboards is that I can see those things on my phone but I can't see the content on my phone on those billboards, that kind of makes sense. So I can watch movies and see ads on my phone but I can't watch TikTok or go on social media at the cinema, sort of like that.

Interviewer: So do you feel like that you're spending lots of money on digital content nowadays like on any platforms that you may use?

Lulu: Yeah, I don't think it's like way too much, like an absurd amount but things like Spotify and Netflix, they probably don't know if I can think of right now but they do cost money every month.

Interviewer: So do you think that without the availability of those digital content and you were to buy the CD and the music disc straight from the store, would that be more expensive for you?

Lulu: I'm actually not too sure about the prices but I can 100% say that it's a lot more inconvenient and I wouldn't have the energy or just time to do those things so I might as well just be more willing to pay more expensive prices just to have it accessible on my phone.

Interviewer: Great, that's a great answer. So to continue, I want to ask you, do you think that while supporting the music and movie industry and also the artists themselves as much as in the past since now we are paying directly to the platforms, not to the artists?

Lulu: I'm not really, because in a way it could be promoting the music even more.

Interviewer: So has your usage of your devices to access digital content influenced you in any way to go to, for example, concerts, the actual venues where those artists perform?

Lulu: Definitely, because of social media and listening to those music, the artists on my phone, I'd definitely be more inclined to go to their concerts, pay for their merchandise, buy fan things, like for them. For example, if you're an artist, you're a judge, I would definitely, I'm going to his concert so I did and that was from me listening to his music on various platforms.

Interviewer: I'm not really [concerned] because in a way it could be promoting the music even more. So, has your usage of your devices to access digital content influenced you in any way to attend, for example, concerts or the actual venues where those artists perform?

Lulu: Definitely, because of social media and listening to music and artists on my phone, I'd definitely be more inclined to go to their concerts, pay for their merchandise, and buy fan things like [merchandise] for them. For example, Joji had a concert I enjoy, I would definitely plan to go to their concert, like I did, and that was from me listening to his music on various platforms.

Interviewer: So, I was wondering, since you've actually [attended a concert], where did you first listen to his song? Was it from any of your digital devices or was it word of mouth from a friend, if you still remember?

Lulu: So, a while back, I distinctly remember it was from YouTube, and that's about all I can remember. YouTube was the platform.

Interviewer: I know from talking to you that you consume a lot of different digital content, like [videos on platforms such as] YouTube. How do you decide which device to use for those different types of digital content? Do you have a preference to use one device over another?

Lulu: Well, when it comes to platforms, I do believe some are better than others for different purposes. For example, I'd definitely be more likely to watch Netflix, YouTube, and listen to music on my MacBook, because of the better sound quality and larger screen, among other things. However, my phone is easier for texting and watching TikTok because it just feels right.

Interviewer: In terms of digital content that you enjoy, like videos and music, are there any types of digital content that you view as a task? For example, videos you watch to learn things, and also digital content that helps you communicate with your friends as a task?

Lulu: Well, the majority would be for educational purposes, for example, using Zoom and watching tutorials on YouTube, and attending lectures online.

Interviewer: Do you feel that other digital content, like videos that you enjoy and Spotify, has distracted you from focusing on things that you don't like?

Lulu: Well, I feel like yes, because in a way, since it's the same device, it's very easily accessible with literally one click. So, in a way, yes. For example, I could be rewatching my lectures and I'll just be inclined to start watching something else or something like that.

Interviewer: What strategies do you have in place to help you avoid getting distracted? For instance, to prevent mingling one type of content with another?

Lulu: I don't really have anything in place, apart from a schedule or plan, but I feel like it's more about the mindset. For example, having the mindset that I must finish this by a certain time, or completing my assignments and things like that. It's more about motivation and thinking "Oh, it's due soon so I have to do it." In a way, this mindset has been built up over time through high school and VCE.

Interviewer: Since you have so many devices in your life, do you feel the need for a digital detox occasionally? For instance, taking breaks to enjoy life without any digital devices in your day?

Lulu: Definitely, I do believe we can't be on our devices 24/7 as it's really unhealthy and bad for our physical health. Doing normal day-to-day things in life like going for a walk, doing some exercise, meeting up with friends that you love, and engaging in hobbies here and there are very important, and I definitely can't live without those.

Interviewer: So, what would be an ideal day for a digital detox if you had a day to yourself without any devices?

Lulu: On a day like that, it would definitely be during the holidays, and when I don't have much work due and most of the assignments are off my chest and exams are done. I would definitely either go on a holiday to another country - I wouldn't even think about watching YouTube or TikTok on days like that. I'd maybe take photos, but when I'm traveling, not as much. I would choose to travel, or I could be out with my friends shopping for things. Since I love the summer, I would go to the beach or maybe have a picnic in a park with my friends, just things like that.

Interviewer: Thank you for sharing your experiences with us today, Lulu. Your input is incredibly valuable and will contribute to a deeper understanding of experiences with digital content on digital devices nowadays. Do you have any final thoughts or comments you would like to add?

Lulu: Not really.

Interviewer: That basically wraps up everything we need to talk about today. Thanks for the interview.