UQ Business School

24th April 2023

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

BISM7221 Information Systems Control, Governance and Audit

GoNCharge

Assignment Specification

SEMESTER 1 2023

Purpose

This document provides the Assignment Specification for the assessment item "Business Consulting Report (IS Recommendations)". You should refer to the associated Assessment Guideline for the Marking Rubric.

Note: this assignment is an **individual** assignment and will be electronically submitted. You may discuss (but not collaborate on) the assignment with your peers. The work you submit should be yours, and yours alone.

About GoNCharge

The sudden decarbonisation of the world economy has created a multitude of business opportunities. Central to decarbonisation has been the rapid uptake of electric vehicles (EV) spurred on by high petrol prices for the (previously) 'normal' internal combustion engine. Although popular around the world, Australia faces unique difficulties in this regard as long-distance trips often require long waits at electric vehicle charging stations.

These waits are even worse during peak periods such as the Easter weekend and Grand Final weekend.

GoNCharge is a provider of mobile charging solutions that address this problem. Through a mobile app, travellers can book extended range batteries (marketed as the 'GoBatty') that attach to a standard roof rack of a standard EV. The GoBatty can be swapped out at existing exchange points at service stations – each battery is about the size of a large flat roof rack 'pod' – throughout Australia.

The GoBatty is swapped onto the vehicle (or added on the first leg of the trip, or removed on the last) and the GoBatty charges the main EV battery while the EV is driving through an integrated adapter. The exchange point is a large machine that charges the GoBatty until full, and has an automated electric block-and-tackle mechanism to facilitate loading and unloading it onto the roof rack (these batteries are HEAVY!)

The driver backs into the parking space and uses the automated mechanism to swap out the battery. The driver then drives away while the EV's battery is charged from the extended battery. The whole operation takes approximately 3 minutes and adds about 250kms of range to most EVs.

Hence the name: Go and Charge!

If a driver books a GoBatty with 24 hours of notice, they are guaranteed to have an extended battery available at their planned station. If the GoBatty is not available for some reason, GoNCharge will pay a 'Don't Surprise Me Fee' (DSMF) of $100 to the customer. This is called the 'No Surprises Guarantee!' Customers can book their extended battery at any time of the day or night on any day of the week, but the DSMF only applies if at least 24 hours' notice is given before your planned trip. The user nominates their collection points along their planned trip.

GoNCharge has its offices located in Brisbane, near Hanlon Park at Stones Corner.

GoNCharge is a privately owned company, but it has received significant funding from the Clean Energy Finance Corporation (CEFC)to improve the take-up of electric vehicles in Australia. It is seen as the perfect solution to ensure that the purchase of an electric vehicle does not 'ruin the weekend' - and it even helps you tow a boat!

GoNCharge has been having difficulties with their finance lately. Although the new and novel GoBatty product has had considerable market success due to their catchy slogan 'Don't go batty – GoBatty!!!', the business is still having difficulties maintaining profitability.

You have been engaged by the GoNCharge board of directors - at the discreet urging of the Clean Energy Finance Corporation - to provide them with consulting advice for improvements to their IT governance and IT operations, as well as to undertake a fraud assessment.

As part of your brief, you are therefore to consider how IT governance can be improved at GoNCharge as well as consider operational and fraud issues as part of your IS audit role. You are developing a Consulting Report that will be provided to the GoNCharge Board.

You, as a consultant, are here to help GoNCharge become both more effective *and* efficient.

You are provided with a SQL data file with system information in it for your analysis as part of your review. You are also provided with case notes relating to discussions with key players in this scenario.

You need this information to answer the Guiding Questions in your Consulting Report, which are at the end of this Specification.

Background

Data Files

The data files for this assignment are located on Learn.UQ with this Case Description. This is an SQL file for uploading via DBeaver.

The file is called "populate_goncharge_script V1.sql", and it is provided on Blackboard with this assignment specification.

This is a database population script. It is executed exactly as provided. You will need to ensure that the connection is set to your server and that the database is connected to your own already-created database ('goncharge') before running this script.

When you run this script, you can then run a separate script “populate_goncharge_test V1.sql”. You will then be presented with the below information. **Check that your database passes all tests.**

002	TABLE NAME	ACTUAL ROW COUNT	EXPECTED ROW COUNT	TEST RESULT
005	authorizations	438	438	PASS
007	backup_log	730	730	PASS
010	casual_hourlyrates	4	4	PASS
030	customer	2113	2113	PASS
040	employee	146	146	PASS
050	job_position	14	14	PASS
060	nos_guarantee	44763	44763	PASS
070	payment_made	1216	1216	PASS
080	payroll	52	52	PASS
090	payroll_detail	5494	5494	PASS
100	salaries	26	26	PASS
110	standard_hours_log	159	159	PASS
120	status_lookup	2	2	PASS
130	tax_rates	4	4	PASS
140	vendor	91	91	PASS
150	vendor_invoice	1217	1217	PASS

An SQL file is provided that is a companion to this Assignment Specification with data for the year **2022** on it – this data is to be analysed by you as part of your consulting report.

When this file is processed in PostGRES, an ERD will be created to show the relationships between data tables.

IT Services

GoNCharge has several key information systems. These systems manage their accounts receivable (customers and therefore debtors), accounts payable (suppliers/vendors), payroll, and the ‘No Surprises Guarantee!’ system. There is also the Backup Log system and the access control system Sybil. These information systems are mostly all legacy systems developed a long time ago for GoNCharge (back when the company used to operate as a mobile fuel delivery service and provide emergency backup power by distributing diesel generators to mining sites), and the owners are determined to recoup their investment by using these systems for as long as possible.

There is an IT support department. There are 12 people currently employed in the GoNCharge IT department. The IT Manager is Rashidi Younes, and she prides herself on running a tightly knit team. Kato Yul is the current software developer (all software is written in a combination of Visual Cobol, Python, and APLX – APLX is a fairly obscure programming language) and five software maintenance staff, as well as database administrator (DBA), Tracy West. There are also four IT support maintenance personnel who are paid the same as the software maintenance staff. The team works as one when GoNCharge is busy with projects, and all members of the team pitch in to complete work. Rashidi oversees the IT team but lets them do their work as they see fit; she relies on Tracy as her assistant manager.

The IT department has significantly increased as GoNCharge pivoted to portable EV charging. For a long time, there was only Herbert Geschwitz developing software in his favoured programming systems: Cobol and APLX. All legacy systems are written in Visual Cobol and APLX and are the back-office systems that implement the website transactions.

The software developer, Kato Yul, is a relatively new hire, and she develops software principally in Python, though has a working knowledge of Visual Cobol and no understanding of APLX at all (who does?) To address the gap, Herbert Geschwitz – the recently retired software developer – is retained on a contract of $5,000 per annum to maintain the software code for the legacy systems.

This usually takes about one day a week. Herbert helped build the original systems – the Accounts Receivable, Payroll, Accounts Payable and the GoNCharge Guarantee Payroll systems – back in 1983 when GoNCharge was first starting out as a mobile fuel delivery service and distributor of diesel generators to mining sites before transitioning to the ‘new world’ of clean energy.

The IT team held a retirement BBQ for Herb where he received a $50 JB HiFi voucher and a novelty ‘World’s Most Awesome Programmer’ coffee cup (featuring Professor Frink from The Simpsons).

All team members are agile and flexible and ensure that the work is done as required. For example, Helen Currie is in an IT support role, but has a software development background and regularly works on maintaining and updating the payroll system as much as she can. All software development and maintenance staff work on the system to ensure that the important applications – like the GoNCharge Guarantee system – continue to provide GoNCharge with a competitive advantage.

Helen seems devoted to GoNCharge and rarely – if ever – takes holidays.

Tracy West is the DBA at GoNCharge, and she helped Herbert with building and maintaining the original systems when GoNCharge went online. This was back in 2002 through her consulting company, BestWest. She was later hired by GoNCharge directly and continues to help build and maintain systems at GoNCharge as well.

Rashidi Younes really relies on Tracy and is sorry that due to cost-cutting Tracy's salary – which used to be relatively high, as she gave up her software consulting career to work for GoNCharge – has been reduced. Although ostensibly Tracy's hours were reduced, Rashidi knows that Tracy's hours have not really changed much at all.

IT Governance

GoNCharge is a relatively small company with around 150 full time and casual employees. Jeffrey James is the Chief Executive Officer, and he makes all decisions. Quinnlyn Yao is the Chief Financial Officer, and Yvonne Price runs the sales team as Sales Manager.

GoNCharge does not have an IT Steering Committee (Jeffrey says that "it's only another waste of time – besides, it's IT. Not what we do around here – we are not a tech company, we are strategic enablers of the Decarbonisation Revolution!"). Jeffrey believes that he knows whether a project is worth funding 'just by looking at it' and besides, ‘business cases are all horse-hockey – not worth the laser printer ink they are printed with’.

Instead, Rashidi Younes prepares the IT Budget each year based on the age of the equipment in place, and this budget is approved by the Executive Team of Jeffrey, Quinnlyn, and Yvonne.

Once a year, Rashidi attends the Strategy Day with the Executive Team; Rashidi really likes the muffins that she gets through that process. Every strategy day, Rashidi asks for a budget to remove the creaky, old information systems that were developed by Herbert – despite the protestations of his team who don't want to learn new software - but Jeffrey is adamant that he wants to get his money's worth out of GoNCharge's IT.

Physical Infrastructure, Disaster Recovery and Data Storage

GoNCharge has its Data Centre in the basement of the Little Bunyas ChildCare Centre in Waterford (Jeffrey is a friend of the owner). The centre is at the intersection of Loganlea Road, Albert Street, and Tygun Road, near the Logan River. This is a building where the children have a fantastic outlook over the Logan River. Particularly since the savage Logan River flooding caused by Cyclone Debbie in 2017, this building has been upgraded to a magnificent standard, and with the most recent floods it was out of action for only a week.

There is one UPS (Uninterruptible Power Supply) unit in the server room that is sufficient to power the data centre for three hours in the event of unexpected power outages. There is an air conditioning unit in the data centre in the basement, and to save money and the GoNCharge carbon footprint this air conditioning unit is powered down after-hours and on weekends.

Biometric controls lock the room. All members of the senior leadership team and the IT Team have access to the data centre, as well as Alice Sloan, the GoNCharge receptionist. Alice also maintains the security logs for the data centre.

The data centre runs the servers for the information systems used by GoNCharge. These run a combination of Linux (Mandrake Corporate Server 3, Linux 2.6.3) and Windows 2000. All information systems are now built on PostgreSQL Version 7; they were originally developed using the Ingres database management system and Herbert ported them to PostgreSQL (since PostGRES is open source, he changed the code to be more efficient.

With a laugh, Tracy notes that she refuses to upgrade any of these systems because it would break all the information systems developed for GoNCharge and, if it isn't broken, there is no need to try and 'fix it'.

All corporate files, however, are hosted on Dropbox Business. GoNCharge uses Office 365 and Dropbox to manage its corporate files. Backups of files in the data centre are made every day, and the log of these backups is recorded in the data files provided (see the backup_log table).

The custom-built accounts receivable, accounts payable, payroll and GoNCharge Guarantee systems are automatically zipped each day and stored as an unencrypted file on OneDrive.

The business continuity plan (BCP) is maintained by Rashidi Younes. It was last updated five years ago when the new data centre in the Little Bunyas basement was constructed after Cyclone Debbie.

Rashidi regularly tests the BCP by sending a multiple-choice quiz to all staff members on what to do in the case of emergency.

Accounts Receivable System

Accounts receivable is the system that records how much customers owe GoNCharge. This is a custom-built system. It has relationships with the No Surprises Guarantee System – which is where customers are refunded their GoNCharge Guarantee.

In the data files, you are only provided with the 'customer' table. This system contains information on customers, their credit limit and the amount owed by customers. A credit limit is provided to customers as many customers have found themselves short of cash after shelling out to buy an EV!

However, Jeffrey tells you that absolutely no customer is allowed to exceed their credit limits – and they don't! He receives regular reports on credit limits from the custom system and maintains a close eye on this information. To ensure separation of duties, Alice Sloan, the receptionist, prints these regular reports of customers exceeding their credit limit and provides them to Jeffrey.

Accounts Payable System

Accounts payable is the system that records the money that GoNCharge owes to its creditors. Again, this is a custom-built system. It has relationships with the payroll system – particularly in relation to the tasks undertaken by different employees in the Finance department. Creditors (vendors) are only paid by finance officers.

In the data files, you are provided with several tables.

The 'vendor' table records details about vendors, including the company name, address, any notes about the vendor, and the amount that GoNCharge owes to the vendor. The amount owed to vendors is the total of all amounts owed on each vendor's invoices (i.e., the 'amount_owing' field in vendor_invoice).

Vendor invoices are recorded in the 'vendor_invoice' table. It records any invoices received from vendors, including the amount of the invoice, the date the invoice was issued, and how much is left owing on the invoice. When the invoice is paid, the 'paid flag' field is set to 'Y'.

Payments to these vendor creditors are recorded in the 'payment_made' table; this table records the date the payment was made, the amount paid on the invoice, and the related vendor and invoice. It also records the finance officer that processed the payment in the 'finance_emp_id' field, which stores the employee's employee number from the employee table. Only finance officers process these payments.

The payment_made table relates to the vendor, vendor_invoice, and employee tables. When a payment is made, the amount_owing field in the vendor_invoice table is updated so that the amount owing in vendor_invoice matches the amount of the invoice less payments made as recorded in the payments_made table.

Quinnlyn advises that – due to the company's worsening cash position – as Chief Financial Officer she has been making sure that invoices are paid in full only when the terms (the number of days allowed before the invoice becomes overdue) have been fully utilised; she admits that, occasionally, some invoices are paid later than that as cashflow is particularly poor right now.

This means that sometimes, invoices are only half-paid after 14 days, due to the worsening cash position but Quinnlyn is adamant that all invoices are paid within two months.

Payroll System

Payroll is the system that records money paid by GoNCharge to its employees. Again, this is a custom-built system, and it has relationships particularly with the Accounts Payable system (where the employee number of the finance officers that make payments to vendors is recorded).

In the data files, you are provided with several tables.

The 'employee' table is the centre of the system. This records all employees, their home address, the type of job they hold and whether they are full time or part time. The employee's next of kin is also identified. The employee table is related to the 'job' table, the 'status_lookup' table, the 'ft_salaries' table, the 'payroll' table, the 'standard_hours_log' table, and the 'payments_made' table.

The 'job_position' table provides a unique identifier for each job held at GoNCharge. There are fourteen different types of job, including part-time and casual jobs. This table simply provides a description for each job. The job table relates to the employee table, the ft_salaries table, and the pt_hourlyrates table.

The 'status_lookup' table simply describes the status code set out in the employee table, to which it relates. Employees are either full time (these are salaried staff and do not require standard hours to be recorded) or part time (and so standard hours are recorded).

The 'ft_salaries' table provides an historical listing of the salaries paid to full-time positions. When the salary changes for specific jobs, an extra row is added to the ft_salaries table together with the start date. For example, job 11 – 'Database Administrator', the position held by Tracy West – started the year on $92,000 annual salary, and this was reduced to $80,000 on 1st July. This information is used to determine the total amount paid to individuals in the payroll detail table by dividing the annual salary by 52.18 (this calculation turns salary figures into equivalent weekly payments – after allowing for leap years).

Similarly, the 'pt_hourly' rates table records changes to the hourly payments made to part-time employees. Again, this table records the date of a rate change for each role. These roles only receive pay rises twice a year – once in January, and once in July.

As with the 'ft_salaries' and 'pt_hourly' tables, the 'standard_hours_log' table records changes to standard hours for each employee. The most recent value in the standard_hours_log table matches to the current_standard_hours field in the employee table.

The payroll table summarises the details of all pay runs. Note that the ft_salaries, pt_hourly, and the standard_hours_log tables are applied as at the date of each payroll – so for example, if a salary is changed on or before the date of the payroll, then that salary applies according to the rules in the ft_salaries table. The payroll table records the payroll number, the date of the payment, the amount paid to all employees after tax, the tax paid, and the total salaries in that pay run. These amounts summate their respective fields in the 'payroll_details' table. The payroll table relates only to the payroll_detail table.

The 'payroll_detail' table records the net payment, taxation withheld, and the total payment made to each individual employee. The sum of the three figures recorded (net payment, taxation, and total payment) equate to the respective value in the payroll table for each pay run (i.e., total_net, total_tax, and total_salaries in the payroll table respectively). Note that net payment is the total payment less the taxation amount.

This table relates to the employee table, the status_lookup table, and the payroll table.

The taxation amount is determined by reference to the tax_rates table. This is a progressive tax system. For example, a person earning $1,000 in a week will pay 0% tax on earnings up to $348.79, then 19% tax on earnings between $348.79 to $862.42, and 33% tax on earnings exceeding $862.42 (all the way up to the next threshold). For a $1,000 payment, therefore, an employee would pay 0% of $348.79, 19% of ($862.42 - $348.79), and 33% of ($1,000 - $862.42) = 0 + $97.59 + $45.40 = $142.99 in taxation.

Each week Quinnlyn Fisher asks Alice Sloan, the receptionist, to prepare the electronic report for the payroll and then Quinnlyn signs off on the payment made. Alice is asked to prepare this to ensure that reporting duties are kept separate from the transaction recording duties of the finance officers working with Quinnlyn.

No Surprises Guarantee System

The GoNCharge system is another bespoke (custom) system at GoNCharge. This system tracks all guarantees paid out to customers if a battery is not available when they arrive to swap out the charging battery. GoNCharge is rightly proud of its customer relationships and uses the No Surprises Guarantee to cement that relationship through good, valuable service.

In the data files, you are provided with a single table, ‘nos_guarantee’.

This table identifies the order date, expected arrival times, actual ready time of the battery, actual arrival time of each customer for each leg of the journey. It also records the delivery driver or

technician that ensured that the battery was ready – batteries can be charged off-site and delivered, or a technician can prep from their home and deliver the battery to the collection point. The $100 guarantee is paid if the customer arrives before the battery is ready AND the battery is not ready by the due time.

The guarantee payment is calculated and stored in the guarantee_payment field of the nos_guarantee table.

Yvonne Price, GoNCharge's Sales Manager, tells you that – obviously – this guarantee has the potential to be expensive, which is why GoNCharge focusses on delivering on its core promise to its customers. This system was built by Herbert shortly before his retirement party, and he still maintains this software.

Sybil Authorisations Control System

The Sybil Authorisations Control Control System provides the authorisation table for several different systems. Sybil identifies all employees that can approve vendor invoices for payment, and records all those who approve actual payments made (see the vendor_invoice.approver_emp_id and payment_made.approver_emp_id fields).

According to the authorizations table, only the indicated employees are to approve records in the identified table (where the approve_rights field is true).

You may be able to look at the authorizations table to validate your assumptions about how each of the different information systems works.

Consulting with Clients over Coffee

You seek an informal discussion with Jeffrey James, the CEO.

Jeffrey James

You arrive early for the first day of this engagement at GoNCharge's offices at Rocklea. You wait for Alice Sloan, the receptionist, to finish her phone call. You overhear part of her conversation: "OK Herb, love you, I'll get that milk on the way home."

Alice turns to you with a large smile, and says "Honestly, you'd think that since he's retired Herb could sort out his own dairy products! What can I do for you?"

You explain that you are here to meet with Jeffrey for a cup of coffee.

Alice places a quick call to Jeffrey to let her know you are here and directs you through the reception doors to the kitchenette.

The kitchenette is at the back of the GoNCharge office building and shortly Jeffrey joins you. Jeffrey is a person without too many airs and graces. He offers you a cup of coffee, and you accept your cup of International Roast coffee meekly.

Jeffrey pulls up a chair to the table, invites you to sit, and starts to talk to you.

"I don't get it," he says. "We are at our most competitive ever, in the strongest and fastest-growing market ever, and I am having difficulty finding the cash to pay our vendors – it just doesn't add up. Confidentially – I'd like you to do some sniffing around. This fraud review – I'll be surprised if there's nothing wrong here, but I can't for the life of me think what is going on. I trust all these people with everything – well, perhaps except for the casual staff, I don't know too many of those since they are managed out of the Little Bunyas facility."

He sips her coffee; you can see where a little glob of undissolved International Roast slides down the side of her cup.

"I'm also concerned about the performance of those casual employees – we have a lot of them on the books, we have a great performance incentive in place, but honestly it feels like we're just being too darn sloppy with the orders these days. Too many batteries are late, it looks like to me! It's frustrating!"

"If you could go through the data looking for evidence of bad stuff happening – that'd be great. I'm a big believer that we can over-complicate things – I don't need a 10-page business case telling me whether something's a good investment. I have a nose for business, I know what's going to work. I don't need committees and things."

"Well. At least, I don't think I do – perhaps you'll have some way to convince me. But if we are going to go formal with bureaucracy around here, it's going to be a real strain on our big happy family. I'd like some recommendations that tighten things up without making our lives impossible."

Jeffrey takes another sip of his coffee and outlines the questions he wants you to answer.

Guiding Questions

The 'Guiding Questions' that follow are to be addressed in your Business Consulting Report. This is to be formatted **professionally and appropriately**, as discussed in the Assessment Guideline document.

Your report is to have an introduction. In the introduction, discuss the **scope of the engagement**, outline your **approach to this engagement**, and provide **an approach diagram** that identifies project outputs and outcomes (use the seminar 'IT Advisory Services' as a guide).

At all times, **write your business consulting report with reference to the Marking Rubric provided in the Assessment Guideline. You are to include at least four supporting SQL Scripts you used in support of your analysis for guiding question 2, 3, and 4.**

Question 1: IT Governance Assessment and Recommendations

Requirements:
You are to review the IT governance controls in place at GoNCharge. You are to:

1. **Identify** the current IT governance mechanisms in place using the 'Engagement Model' from the 'Foundation for Execution' as a guide. It is likely that the 'Minimum IT Governance Practices' discussed in the seminar 'IT Governance' will inform you in this task.
2. **Evaluate** the current IT governance mechanisms (structures, processes, and relational mechanisms) as to whether they are effective or ineffective.
3. **Recommend at least two improvements** to GoNCharge's approach to IT Governance

From the case description, identify, evaluate, and recommend improvements to GoNCharge's approach to IT governance. This should be a section within your Business Consulting Report. These recommendations do not need to address *all* IT governance issues, but certainly should address the most pressing, prominent, concerns around IT Governance.

Your assessment and recommendations should consider the context for GoNCharge, and the information provided in this specification, as well as any further information you obtain during the engagement.

Question 2: Assessment of General Controls

Requirements:
You are to review the Internal Controls System (Physical, IT General, and Application Controls:

1. **Identify** and **evaluate** the current **physical General** controls in place. It is likely that the seminars 'General IT Environment' and 'General Controls' will inform you in this task.
2. **Identify** and **evaluate** the current **IT General** controls in place. It is likely that the seminars 'General IT Environment' and 'General Controls' will inform you in this task.
3. **Identify** and **evaluate** key **application** controls in place. It is likely that the seminar 'Controls Testing' will inform you in this task. (Hint: As a starting point, consider the Sybil system.)
4. **Evaluate** the internal controls system **as a whole**.
5. **Recommend at least three improvements** to GoNCharge's IT General Controls, having regard to their current context and addressing weakness you identified in your evaluation.

From the case description, identify, evaluate, and recommend improvements to GoNCharge's approach to IT governance. This should be a section within your Business Consulting Report. Again, these recommendations do not need to address *all* control issues, but certainly should address the most pressing, prominent, concerns around the controls.

Your assessment and recommendations should consider the context for GoNCharge, and the information provided in this specification, as well as any further information you obtain during the engagement.

Question 3: Identify Operational Concerns with the GoNCharge Guarantee

Requirements:
You are to review the GoNCharge Guarantee and assess whether there are any operational concerns here. You are to:

1. **Identify at least two operational concerns** at GoNCharge in relation to the GoNCharge Guarantee, including a description of these operational concerns.
2. **Make at least three recommendations** that address these **operational concerns.** All identified operational concerns should be addressed by at least one recommendation to GoNCharge management. It is likely that you will wish to make multiple recommendations.

An operational concern can include specific fraud-related controls or focus on efficiency. These recommendations should be new – that is, they are separate to your recommendations in Questions 1 and 2.

This question should be addressed in a separate section within your Business Consulting Report.

You are to examine the data records provided in relation to the GoNCharge Guarantee in the **GoNCharge database.** You should also consider your understanding of the GoNCharge delivery process.

The goal of an operational review is to improve its effectiveness (i.e., that the process is more effective at delivering the right items, on time) and its efficiency (i.e., opportunities to improve item delivery and reduce the GoNCharge guarantee payments made).

For example, you may wish to examine questions such as:

- Is the GoNCharge appropriately controlled?
- Does the guarantee depending on the date of the order or the employee addressing the order?
- Is the approach to the organising of the GoNCharge appropriate?

You will need to explore the database using SQL.

Use appendices appropriately.

Your assessment and recommendations should consider the context for GoNCharge, and the information provided in this specification, as well as any further information you obtain during the engagement.

Question 4: Undertake a Fraud Review

Requirements:
You are to undertake a Fraud Review and document your activities and your findings in the Report. Your report should identify:

1. The **schedule** of fraud detection techniques undertaken (see the seminar 'Business Ethics and Fraud').
2. Any **missing techniques** and why they cannot be performed.
3. Other **ad hoc** indicators of fraud that you identify through exploring the data.
4. The **results** of the tests (include detailed samples of results and SQL commands used in the appendices).
5. A professional **visualized representation** of the results of at least one SQL test procedure used as a histogram, column chart, line chart, or other data visualization (using Excel).
6. A **broader consideration of fraud** in the context of GoNCharge (e.g., the Fraud Triangle).
7. Your **conclusions** as to whether fraud is occurring and **recommendations** to address these fraud issues.

You are to perform tests that could reveal the existence of fraud in the company based on the data that you have. You should design your tests around the ***Fraud Detection Techniques*** discussed in seminars. This should be a section within your Business Consulting Report.

These tests performed are to be documented as a schedule in the report. Some techniques may not be available due to limitations in the data provided, and these missing techniques should be identified together a rationale as to why the technique cannot be used.

However, these techniques are the ***minimum*** to be undertaken – you should explore the data generally as well as the discussion within this specification document to see if there are other indicators of potential fraud.

There may be other clues hidden within the data that you need to investigate. Perhaps - a puzzle worthy of a Roman Emperor?

As part of the professional presentation of this report, you are also to **develop and include at least two visualized representation of the findings** for the relevant SQL Test Procedures used to review fraud. This visualized representation must be created using Excel and be to a professional standard.

You should provide **at least two recommendations** on how to address these fraud issues.

Use appendices appropriately.

Prepared by: Micheal Axelsen
Senior Lecturer (Business Information Systems)

Date: 24th April 2023