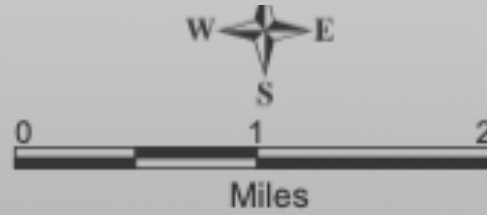


Making Cent\$ of Cybersecurity

Sparking Interest in the Ones and Zeros of Cybersecurity

RURAL MUNICIPALITY OF FRANCIS NO. 127

WEST OF 2nd MERIDIAN



RURAL ROOTS

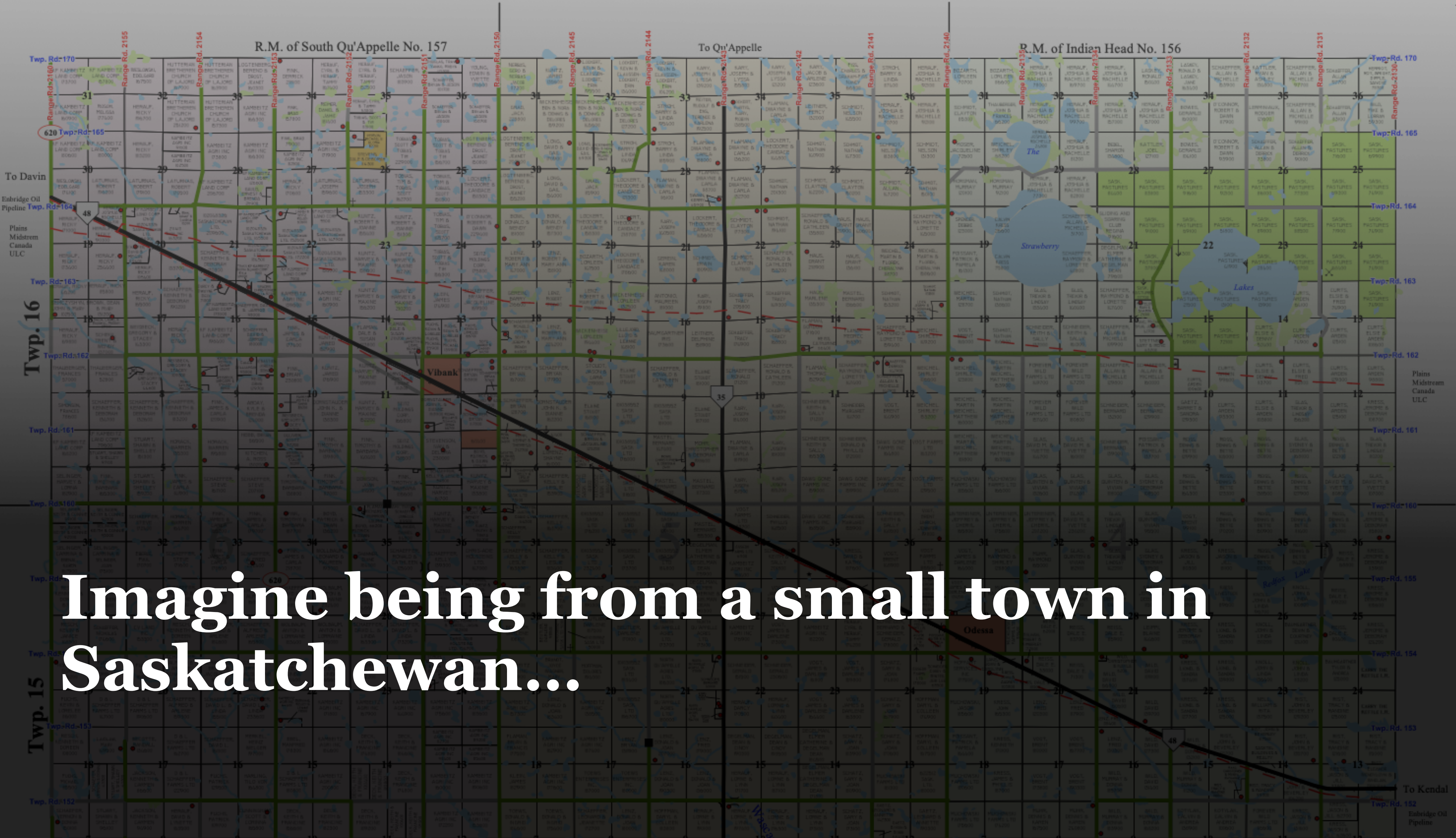
Administrator - Shala Kanasevich
Assistant - Karen Anderson
Box 36
Francis, SK S0G 1V0
Phone (306) 245-3256
Fax (306) 245-3203
Email : rm127@sasktel.net

R.M. Council

- Reeve Richard Morley
- Div. 1 Ernest Gutzke
- Div. 2 Barret Gaetz
- Div. 3 Darren Solie
- Div. 4 Patrick Poissant
- Div. 5 Daryl Hoffman
- Div. 6 David Schaeffer

Legend

- Highways - Paved
- Primary Grid Road
- All Weather
- Clearing The Path
- Seasonal
- Railway
- Waterbody
- Vegetation: Wooded Area
- Watercourse
- Structure/Residence
- Community Well
- Material Site
- Cemetery
- Compressor
- Low Level Crossing
- Bridge
- Organic Farm
- Provincial Owned Pasture
- Pipeline



Imagine being from a small town in Saskatchewan...



RURAL ROOTS



RURAL ROOTS

“Watch out around the livestock!”

RURAL ROOTS

“Be careful around the power lines!”

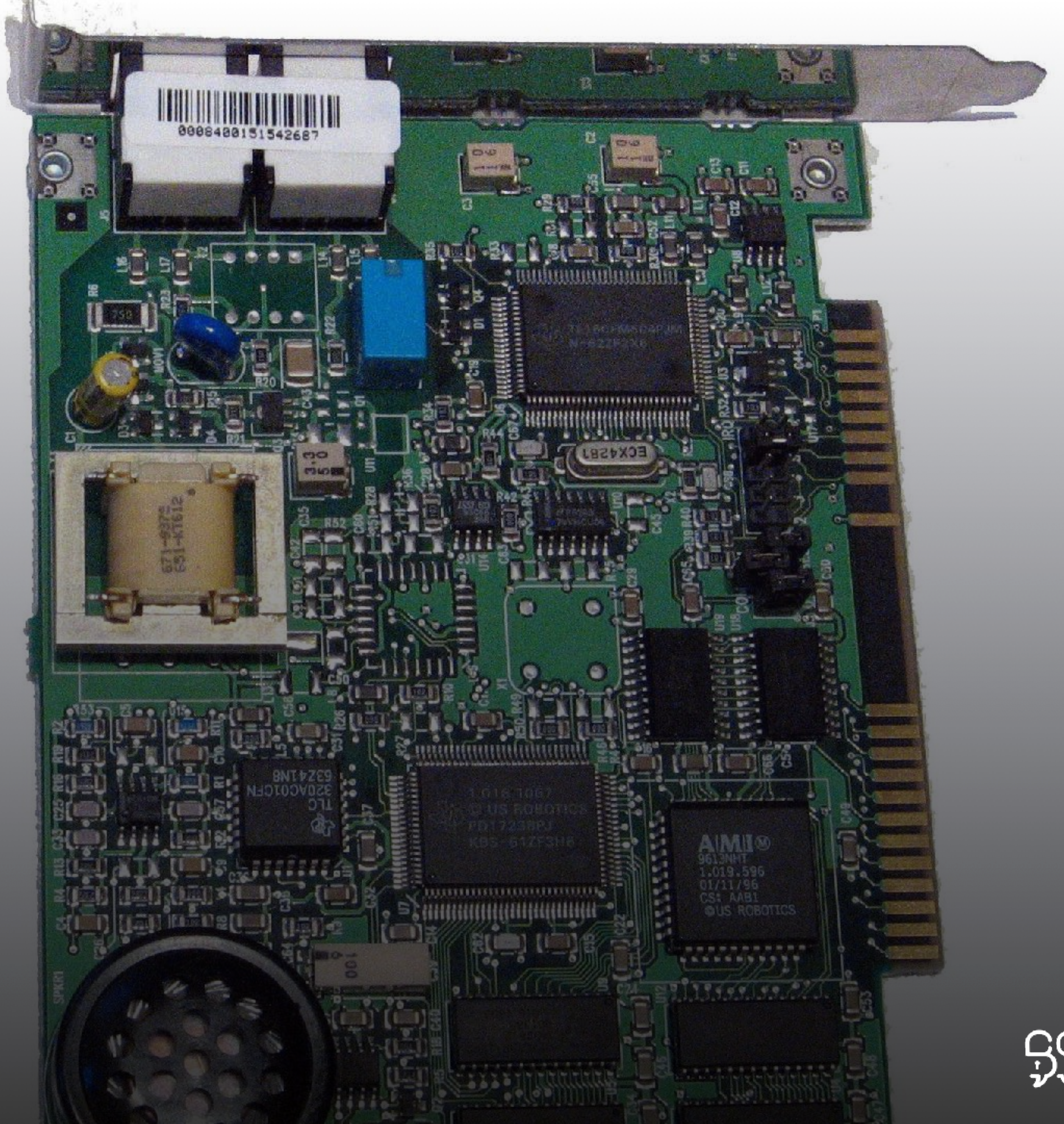
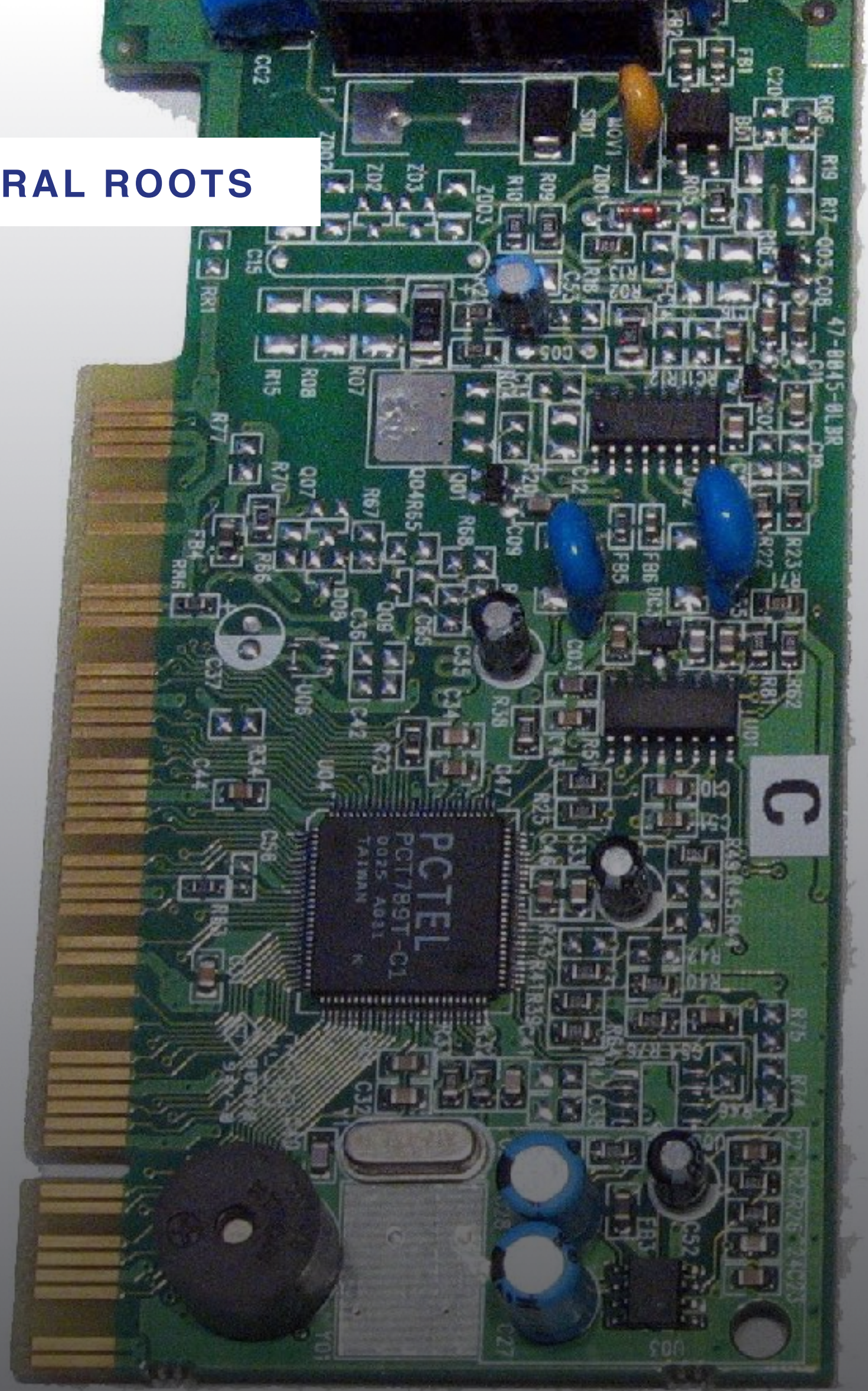
RURAL ROOTS



“...and careful on the ‘chatline’!”

Microsoft
Windows 98

RURAL ROOTS



RURAL ROOTS

Think of the world of possibilities...


RURAL ROOTS

My Documents



Internet Explorer

Connect To

 Internet Provider

User name:

Password:

Save password

number:



Unfettered access to technology has dramatically changed our daily lives...

...But in the process of moving fast, we have lost sight of safety and security.

Cyber Fundamentals

A quick look through the key components of cybersecurity, including the “CIA triad” — not ‘spies’.

Today’s Challenges

A walkthrough some of the challenges individual are currently facing as they grapple with disruption.

Future Cybersecurity

Equipping individuals to take hold of the future of physical and digital security in Canada and abroad.

TAKE NOTE

**If you can make sense of money, you
can make cents of cyber (*sorry*)!**

* If anyone knows of good trademark people, please let me know



Cyber Fundamentals

Getting Back to Basics

Let's be clear of what cyber isn't...

Cyber isn't just about "hacking" — there are good, and ethical, hackers out there.

Use terms like **threat actor**, **bad actor**, or **cybercriminal** to specifically reference tricksters.

What is Cybersecurity?

Evolving approaches including people, process, and technology



Expanding applicability to Information and Operational Technology (IT & OT)



Including Internet-of-Things (IoT) and Artificial Intelligence (AI)



Art of protecting networks, devices, and data from unauthorized access or criminal use...

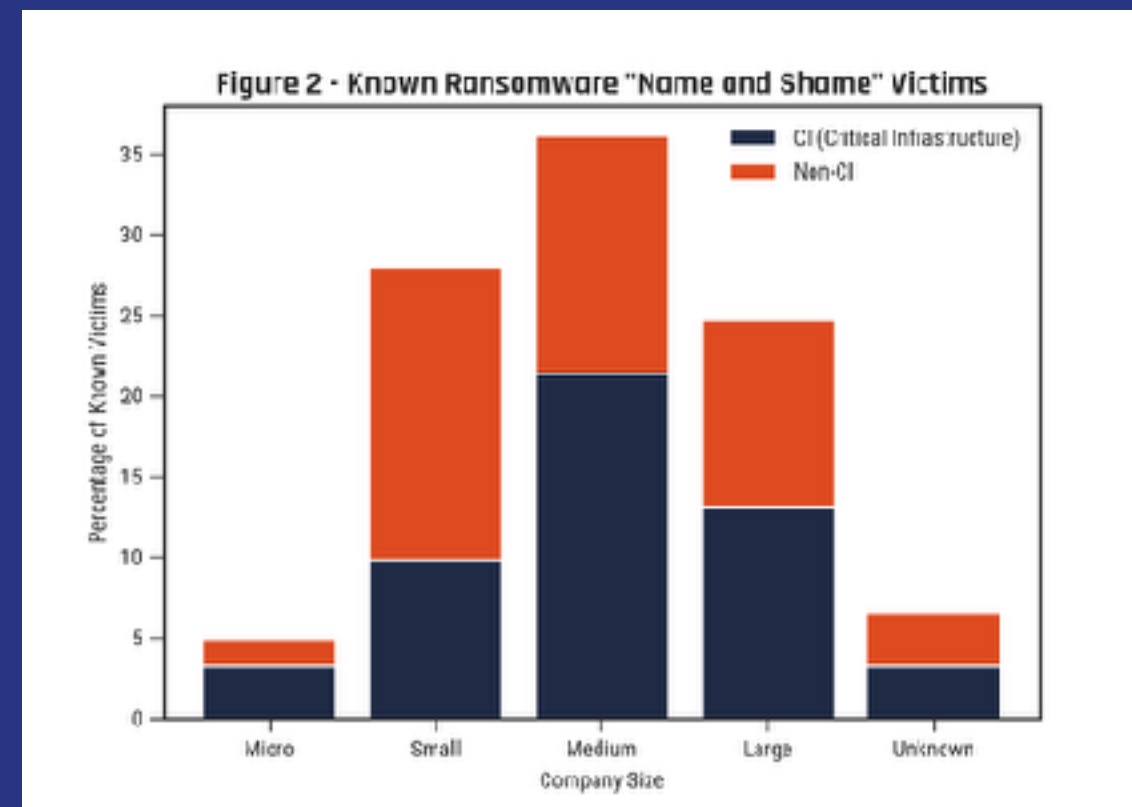


Accessing, changing, or destroying sensitive data

FUNDAMENTALS

Why should we care about cyber?

Many incidents often go unreported; however, the Canadian Centre for Cybersecurity notes 50% of those which were reported an event were critical infrastructure providers.



151%

Increase in global ransomware attacks when compared with the first half of 2020

\$6.35 million

Estimated average cost of a data breach, including but not limited to ransomware

235

Number of incidents reported to Canadian Centre for Cybersecurity from Jan 1. to Nov. 16, 2021



The CIA Triad: Building Blocks of Cybersecurity

Confidentiality

Authorized individual(s) get access to the information they are intended to

Integrity

Information is accurate and trustworthy and hasn't been modified

Availability

Reliable access to the right information by the right person (or application)



Disclosure



Alteration



Denial

Make the Most of Your Experience

We've planned to make this virtual session as interactive as possible. Today's session will use the following platforms:

Participating in PollEverywhere

Throughout today's session, we'll also leverage free-text responses.



Desktop

Use your browser of choice to access the following address:

<https://pollev.com/aleusgroup>

Account Summary

Search/Download

My Options

Welcome, XYZ Company

Account Summary

Primary Account 1234-5678-9 [Add an account](#)

Currency	Original charges	Payments or credits
CAD	\$474.36	

All-Open

Past Due

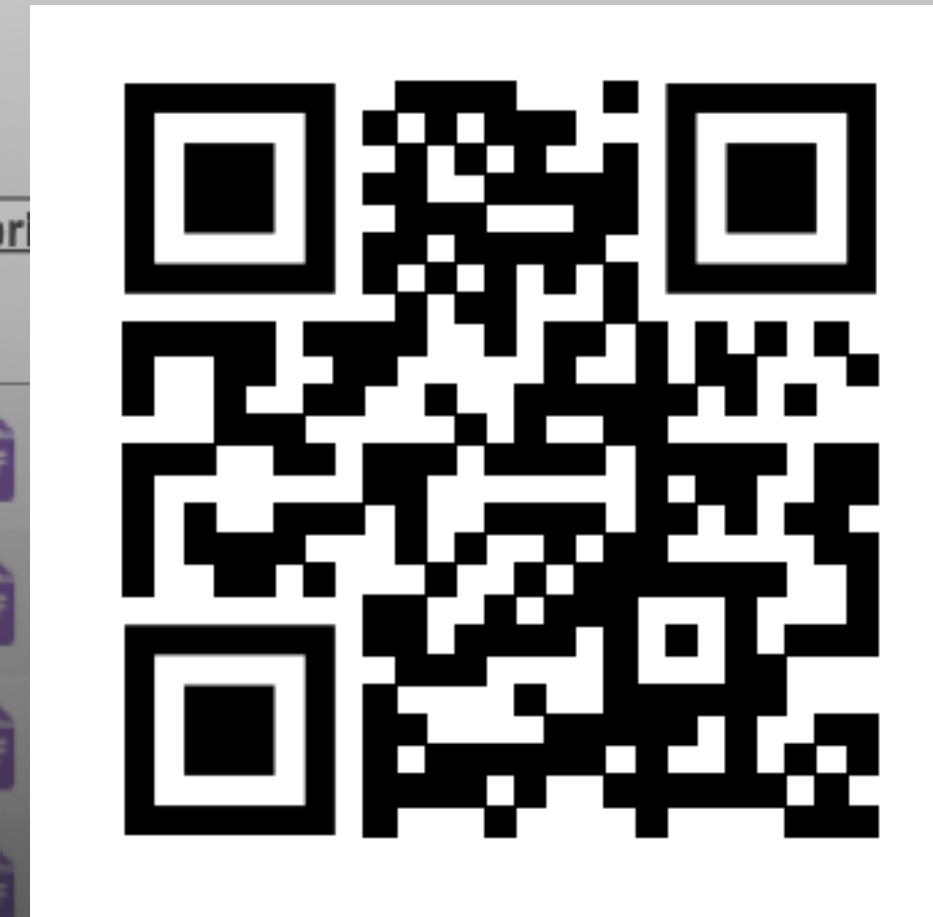
Paid/Closed

In Dispute

Invoice List (All-Open)

Filter by None selected

Select all	Invoice no.	View/print	Account no.	Invoice status	Original
<input type="checkbox"/>	1-123-10001		1234-5678-9	Open	70.75
<input type="checkbox"/>	2-333-11002		1234-5678-9	Open	40.85
<input type="checkbox"/>	2-444-11003		1234-5678-9	Open	43.00
<input type="checkbox"/>	2-123-14005		1234-5678-9	In Dispute	47.85
<input type="checkbox"/>	2-159-11002		1234-5678-9	Past Due	112.50



FUNDAMENTALS

Case Study

A customer received an invoice in the mail requesting payment for an online order.

The company provided a website in addition to a QR code to access a payment portal.



When poll is active, respond at pollev.com/aleusgroup

Text **ALEUSGROUP** to **37607** once to join

Thinking to the FedEx case study, which of the following stands out as the key area of impact?

Confidentiality

Integrity

Availability

Powered by  **Poll Everywhere**

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

Case Study

A municipality made the switch to online voter registration.

Citizens were asked to provide electronic copies of their identification to register to vote.

Mail-In Ballot Request ➤ Inbox x



Brennen Schmidt

to elections ▾

Good day,

Attached please find an encrypted PDF containing my mail-in ballot request, per password to decrypt the attached PDF following your team's reply to this email to

Please [redacted] or concerns.

Regard
Brenne



PDF Containing...

- Copy of Driver's Licence
- Voter Information Package



careful with this attachment.
unless you know the sender

pdf Brennen Schmidt - ...



When poll is active, respond at pollev.com/aleusgroup

Text **ALEUSGROUP** to **37607** once to join

Thinking to the municipality case study, which of the following stands out as the key area of impact?

Confidentiality

Integrity

Availability

Powered by  **Poll Everywhere**

Start the presentation to see live content. For screen share software, share the entire screen. Get help at pollev.com/app

Case Study

A project in the Rose Garden called for the removal of soil; replacing it with new material.

Workers on the project soon discovered they cut into a mysterious cable buried in a corner of the [Rose] garden.”

“It turned out to be the hot line that set off the nation’s military alert.”

— Rachel Lambert Mellon

When poll is active, respond at pollev.com/aleusgroup

Text **ALEUSGROUP** to **37607** once to join

Thinking to the Rose Garden case study, which of the following stands out as the key area of impact?

Confidentiality

Integrity

Availability

Getting to the Root of the Problem

CHALLENGES

The “Cheeto Lock” & Cybersecurity Today





LockPickingLwyrr
@LockPickingLwyr

...

This is a screenshot from a television news report about a prison. I will not mention which one or where. I'm only posting to point out the folly of allowing the TV crew to take closeup B-roll footage of a prison key.



12:21 AM · 2023-03-06



**The state of cybersecurity shouldn't
come as a surprise...**

CHALLENGES

We started small with horsepower,
then to steam...

CHALLENGES

...then we discovered large-scale machinery to cover ground.

CHALLENGES



...and also took to the skies to help maximize application and yields.

CHALLENGES

**...and have since shifted to the
skies enabled by automation.**

CHALLENGES

Upgrading Windows



**...enabled by cloud-based services
which we we can't see or touch.**

TODAY

**That's quite a bit of change in such a
small amount of time...**

TODAY

What are we to do?



TODAY

**IN CASE OF
CYBERATTACK
BREAK GLASS
AND PULL CABLES**

An accurate depiction of incident response when things go wrong.

Must Haves for Data Security & Privacy

A winning game plan is to collect the least amount of data, based on its intended purpose(s), while also ensuring its encrypted while in use, in transit, and at rest.



Data Encryption

(In Use, In Transit / Motion, and at Rest)



Purpose Limitation

Clearly articulate the purpose of data collection from the start. Be transparent with users; don't use jargon.



“We'll only collect this information and use it for this specific purpose...”

Data Minimization

Limit the amount of data collected for a specific purpose. Keep it to the bare minimum and assume data as liability.



“We think we'll have a use for this data sometime in the future...”



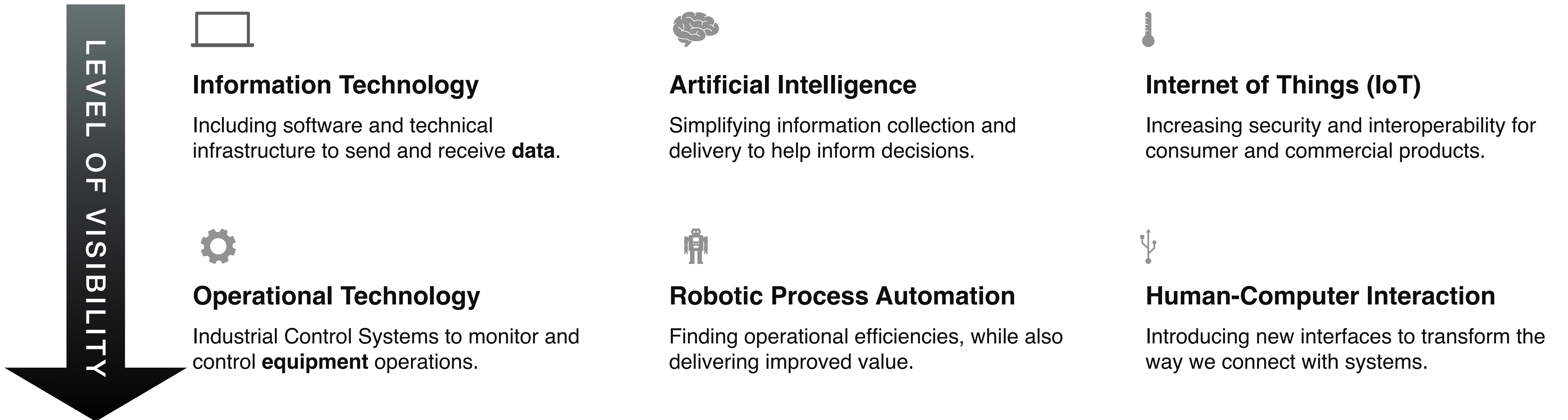
TOMORROW

The Future of Cybersecurity



A Look at Today's Technology Ecosystem

The window is closing for decision makers to take bold and decisive actions to address threats ranging from climate change to technology disruption.



🌐 When poll is active, respond at pollev.com/aleusgroup

📧 Text **ALEUSGROUP** to **37607** once to join

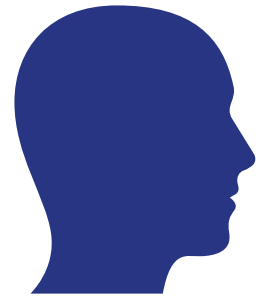
Are you using, or plan to use, Microsoft Power Platform?

Yes

No

Transferring Data into “the Cloud”

Organizations of all sizes must consider the impacts associated with people, process, and technology when looking to migrate to the cloud.

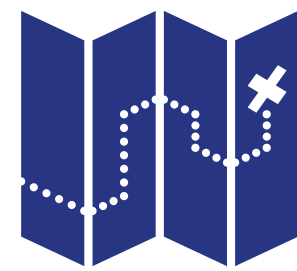


People

Putting a human-centred focus on change is paramount.

Some strategic approaches to consider include:

- **Preparing for change**
- **Supporting the change**
- **Sustaining the change**



Process

Assessment and planning is the key to success.

Some strategic approaches to consider include:

- **Assessment and planning**
- **Testing and validation**
- **Process optimization**



Technology

Organizations may be on the path to support a multi-cloud strategy.

Some strategic approaches to consider, include:

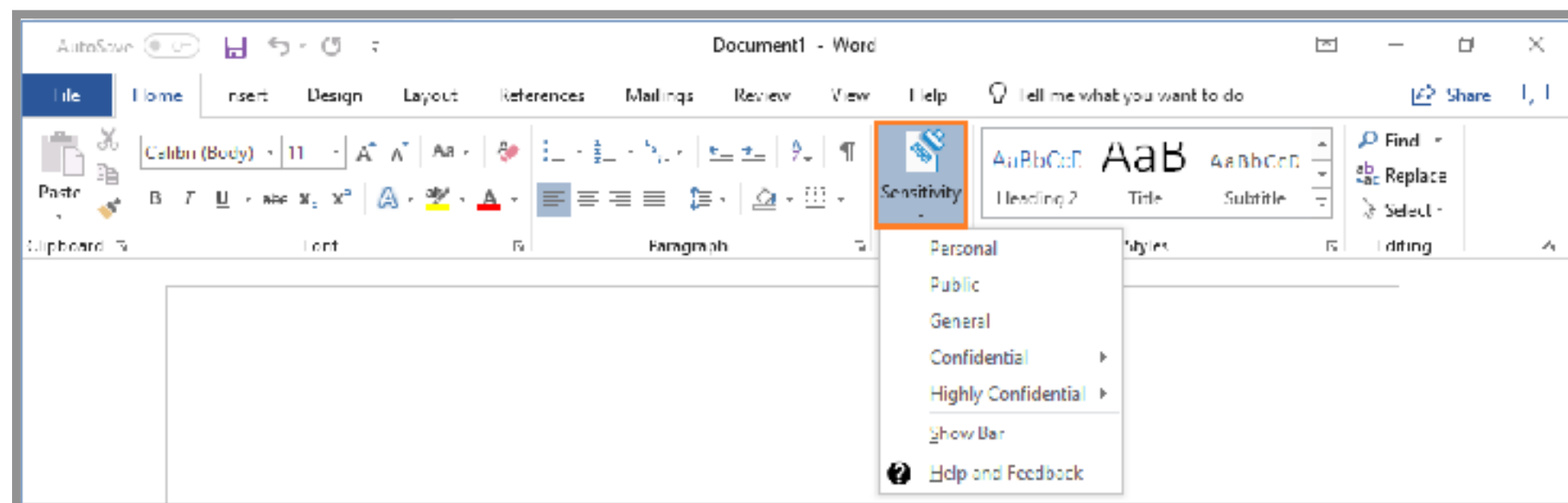
- **Risk diversification**
- **Cost optimization opportunities**
- **Flexibility and agility**

Change Management & Sensitivity Labeling

As more organizations start leveraging sensitivity labeling, records managers can use a human-centric approach to help meet users where they are at.

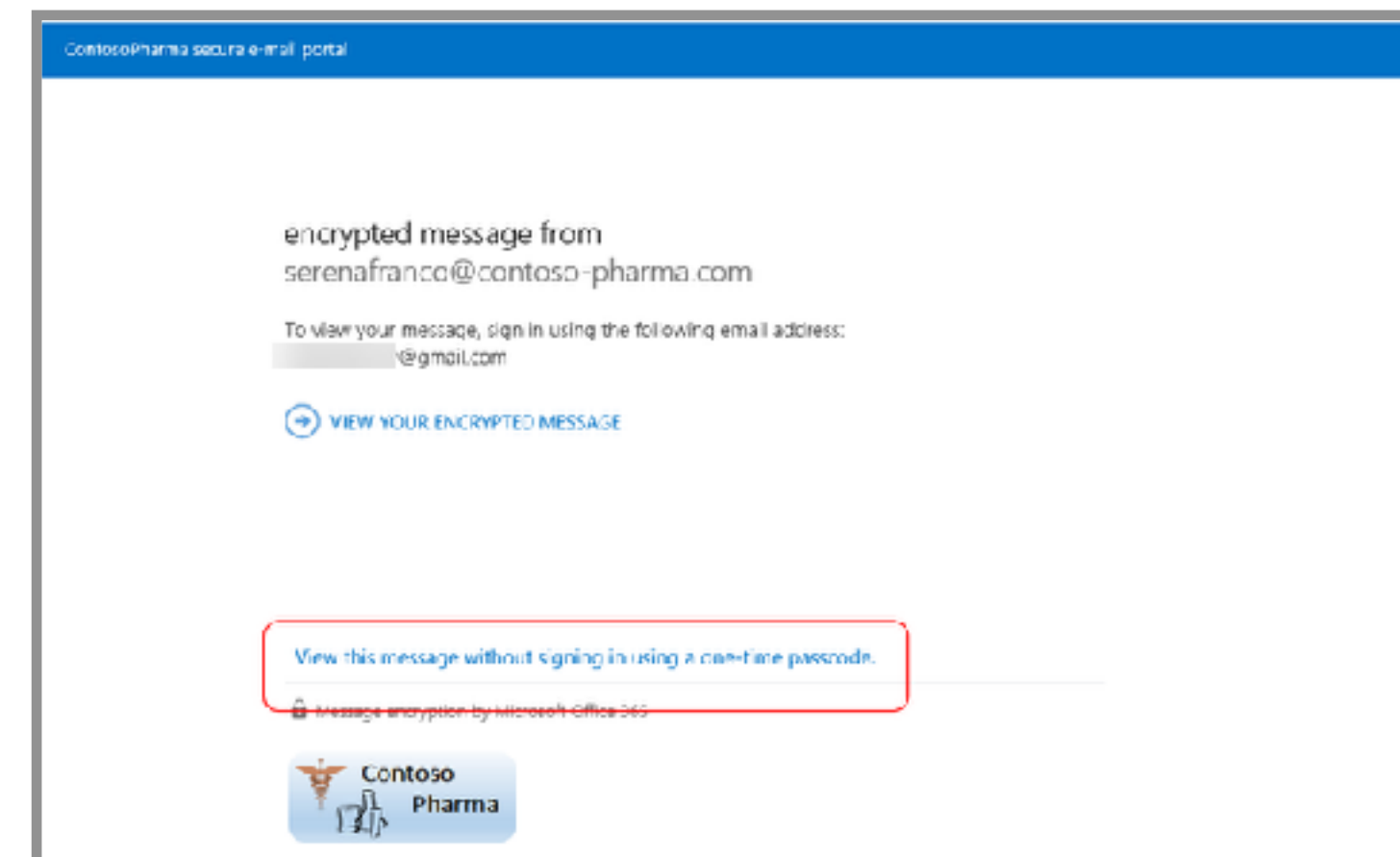
Good: Current State Policy

“Employees are required to apply sensitivity labels to maintain compliance with our records policy”



Better: “What’s in it for Me?”

“With just one simple click, you can help keep our information safe while supporting collaboration”



Process Mapping & Record Retention

Meeting users where they are at with their usage patterns and capabilities can have a profound impact on promoting successful adoption.

Good: Record Retention Policy

Personnel files, legal contracts, and correspondence for record retention and disposition.

Record Type	Retention Period	Disposition Method
Personnel files	7 years after termination	Secure destruction
Financial records	7 years after end of fiscal year	Secure destruction
Legal contracts	10 years after expiration or termination	Secure destruction
Customer data	3 years after last transaction or interaction	Secure destruction
Correspondence	2 years after creation	Secure destruction
Marketing materials	1 year after expiration or withdrawal	Secure destruction
Project files	2 years after completion	Secure destruction
Intellectual property records	Permanent	Archive or transfer to designated repository

Better: Future-Proofing Records

Including key cybersecurity-focused items including device logs,

Record Type	Retention Period	Disposition Method
IoT device data	1 month after collection	Secure destruction
IoT device logs	30 days after creation	Secure destruction
IoT device configuration files	6 months after deactivation or replacement	Secure destruction
Server logs	6 months to 1 year after creation	Secure destruction
Network traffic logs	90 days to 1 year after creation	Secure destruction
Firewall logs	1 year after creation	Secure destruction
Intrusion detection system logs	90 days to 1 year after creation	Secure destruction
System backup logs	1 month to 1 year after creation	Secure destruction

Source: ChatGPT by OpenAI. Prompt: You are a records manager. Produce a high-level data retention schedule in a table format. Develop a separate table and include items specific to Internet of Things, log files, and similar technology-specific items.



Technology Governance

Records managers are in a unique position to support long-term technology transformation efforts based on their subject matter expertise.

SHIFTING OUR APPROACH FROM...

Collecting and storing data “for the sake of doing business”

TO AN EXPECTED FOCUS ON PROVIDING INDIVIDUALS...



Clarity

Users need a clear picture of what kind of information may be, or has been, put at risk.



Consistency

Sectors must build upon agreements by developing and enforcing auditable reporting capabilities.



Visibility

Users should be able to access a like-for-like comparison of the privacy controls claimed to be in place.

TOMORROW

Demo



Humans & Records Management

Sample document sent to a citizen following an appointment with a medical professional

Review the sample document provided below — considering its sensitivity, document classification, and retention period.

John Doe
1234 Anywhere Street
Starlight City, Municipality

August 15, 2023

Dear Mr. Doe,

I am writing to inform you of the results of your recent medical determination for your health card number 999-999-9999. Based on the tests and evaluations that were conducted, it has been determined that you are due for a follow-up appointment.

In accordance with the services that were provided, we are enclosing a billing statement for your records. Please note that the total amount due is \$125. Payment can be made via check or credit card using the account reference number provided below.

Account reference number: SK-1234-323-9009

We also wanted to confirm that we have on file your correct birth date, which is [01/01/1970], and your health insurance number, which is REF120450. Please let us know if any of this information is incorrect or if you have any questions about your billing statement.

Thank you for choosing our services. We appreciate your trust in us and look forward to serving you in the future.

Sincerely,

Billing Department

Document Attributes

Sensitivity
Confidential or Protected




Document Classification
Financial

Retention Period
7 Years




Artificial Intelligence & Record Management

A look at the efficiencies AI can provide to individuals responsible for records management




By using the prompt of channeling a records administrator, ChatGPT was capable of producing accurate responses to the request.

 As a records administrator, I'm happy to help answer your questions about this document.  
What would you like to know?




 What kind of document is this?

 Based on the content of the document, this appears to be a billing statement sent by a medical facility to John Doe regarding the results of his recent medical determination.  




 What kind of sensitivity label should I apply to this document?

 Based on the information in the document, I would recommend applying a sensitivity label of "Confidential" or "Protected" to protect the individual's personal and medical information. This would help ensure that the document is handled and shared appropriately with the appropriate level of security and confidentiality.  

 What document classification should I apply to this document?

 The document classification for this billing statement could depend on the specific document classification scheme and guidelines used by your organization or industry. However, in general, this document could be classified as "Financial" or "Medical" due to the billing and medical information it contains.  

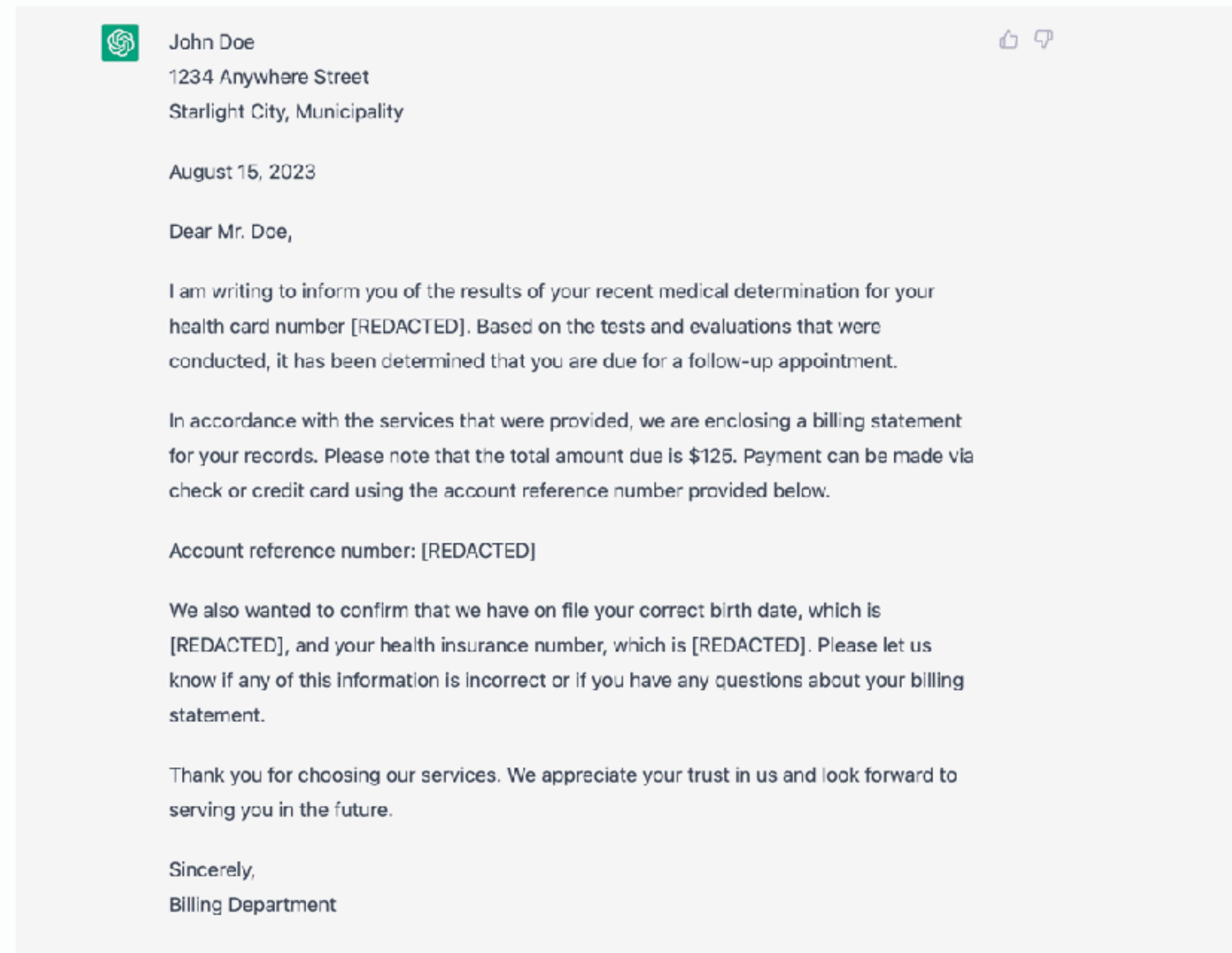
 What retention period should I set for this?

 The retention period for this document could also depend on the specific retention policies and regulations of your organization or industry. However, as a general guideline, medical billing statements should be retained for a minimum of 7 years to comply with HIPAA regulations in the United States. Some organizations or industries may have longer retention periods, so it's important to consult with your legal and compliance teams to determine the appropriate retention period for your specific situation.  

Artificial Intelligence & Record Management

An example of how AI technologies can help reduce the administrative burden on people and teams

Prompt: You are a records administrator. You must abide by privacy and data legislation in the Province of Saskatchewan. Replace any and all sensitive information in the document provided with “[REDACTED]”



Artificial Intelligence & Records Management

The possibilities are infinite when looking at what kind of utility AI can offer us...

Prompt: You are a records manager. You have been asked to provide a response to an information request which has been submitted. Please provide a response.



Dear [Requester],



Thank you for your information request. We have received your request and are working to process it as quickly as possible. Please note that our response may be delayed due to the volume of requests that we are currently processing.

We take our obligations under applicable privacy and data protection laws seriously and will ensure that any information provided in response to your request is done so in compliance with these laws.

We appreciate your patience and understanding as we work to respond to your request. If you have any further questions or concerns, please do not hesitate to contact us.

Sincerely,

[Your Name]

Records Manager

What Should I be Asking about Data?

Data sharing and interoperability is not only going to be a key competitive advantage; it will also become a core requirement of governance and conformance.

- How can I help you meet your goal(s)?
- What mechanisms are in place to keep our user's information safe?
- What kind of considerations are being made on people side of change?
- Which of our existing service(s) can be used to help support this effort?
- How much should we plan to budget to support operations post-implementation?



Here's what ChatGPT has to say...

You are a records administrator. Provide a bulleted list of the top five things I should be thinking about as I consider the future disruption of Artificial Intelligence on records management.

Which of the following is going to be the greatest challenge for records administrators?

Automation: Automation of manual and repetitive tasks

Data Quality: Identifying and eliminating errors and inconsistencies

Security & Privacy: Unauthorized access to sensitive information

Training & Education: Helping users understand and use AI

Ethical Considerations: Bias, discrimination, and unfairness

Key Learnings



Today's actions will determine the future

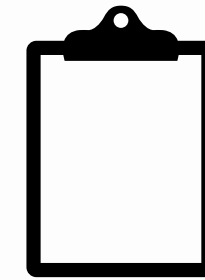
Inaction is not a viable option as we face immense pressures to transform service delivery amid various technology shifts.



It's important to remain ahead of the curve

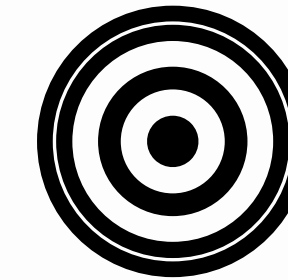
Continue seeking opportunities to forge relationships with the disruptors.

Key Actions To Take...



Prepare inventory of existing tech

Document what kind of Information and Operation technology (IT / OT) is, or may be, in use within and across your organization.



Identify items of importance, and assign risk

Determine risk profile for each item inventoried by evaluating the likelihood and impact of an event.



Explore safeguards based on risk

Collaborate with business and technology stakeholders to invest in appropriate security layers.

THANK YOU

Let's Connect!

Follow bourbon, wine, travels, and the odd post on cyber...



@brenzens



@brenzens

Don't forget to sign up for my newsletter!



brennenschmidt.ca/subscribe



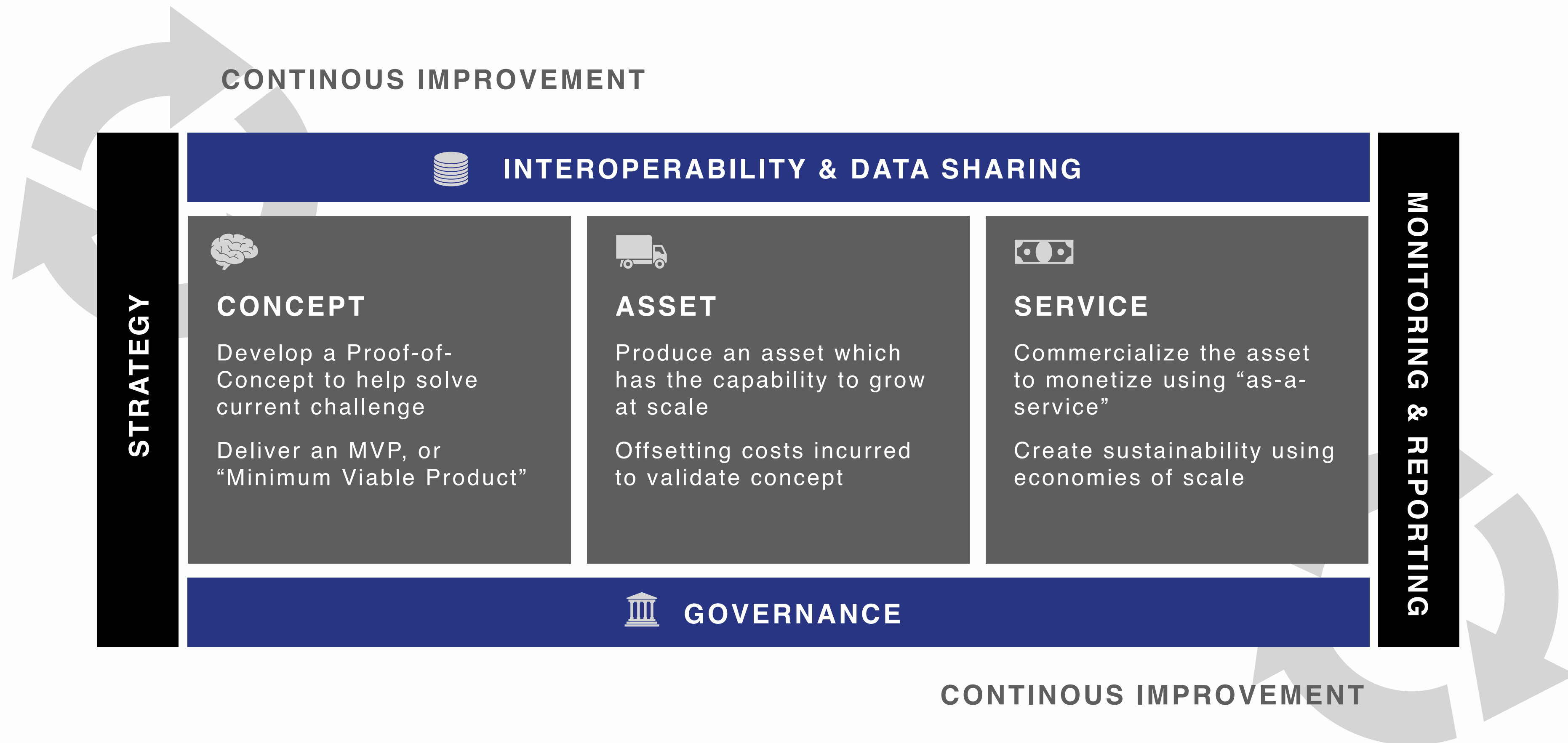
EXTRA

Bonus Materials

(Some things of potential value...)

Transforming Technology Governance

Consider using a framework which is guided by a human-centred strategy and supported by and with continuous improvement.



Disclaimer

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If you require specific advice, please contact us at connect@aleus.ca.

