Vulnerability Risk Assessment tool:
A tool for Agency managers

Spring 2016

Reducing the risk of errors

- Given the size, complexity, and number of transactions the Canada Revenue Agency handles every day, there is always a risk of an error happening.

- Not all errors and their impacts are equal.

- We need to prevent the errors that might have a **significant** impact on the Agency reputation and on the integrity of our programs and operations.

- Here are some key elements to consider to be more **proactive** in reducing the risk of those errors.

No organization is immune…

Even rocket scientists make mistakes!

In 1999, NASA lost a $125-million Mars orbiter because a Lockheed Martin engineering team **used English units of measurement while NASA's team used the more conventional metric system** for a key spacecraft operation.

"The problem here was not the error, it was the failure of NASA's systems engineering, and the checks and balances in our processes to detect the error. That's why we lost the spacecraft."
NASA

Can you think of some high-profile errors that have occurred in your organization?

How did those errors affect the organization?

Canada

Some factors that can lead to errors:

Process controls
- complex or difficult to follow, or not followed
- might not exist or might need strengthening

Awareness
- lack of timely communications when an error does occur
- not adjusting to changes in the environment
- lack of awareness of the importance of error prevention

Employees
- outdated training material
- new or temporary employees might not be aware of key elements of the job

Managers and supervisors play a leadership role

- As a manager or supervisor, you are the first line of defence in maintaining program integrity.

- Identifying and addressing vulnerabilities that can lead to errors in your area makes all the difference in maintaining operational integrity and reducing risks.

- We developed a checklist for managers to help you do just that. You'll like its simple and straightforward approach.

CONTEXT

MATTERS

How do you reduce the likelihood of error?

By designing risk out of the system!

In some cases, a simple change ("preventative controls") can help to reduce or virtually eliminate the risk of an error happening.

Can you think of a real-life example?

Designing risk out of the system:
Real-life examples
Preventative controls

DIFFERENT-SIZE PLUGS

- It is physically impossible to insert the wrong plug into the wrong socket, so the risk of shock or electrocution is eliminated.

- You don't need a 50-page manual; you just can't plug it in!

PRE-FILLED PILL BOXES

- Pharmacists put the exact dosage and medication the patient needs into individually sealed pill boxes. They also note the time of day to take the drugs.

- Reduces the chances of accidentally taking the wrong medication or dose or not taking the wrong dose at all.

Designing risk out of the system:
Some of the Agency's successes

Corporate Tax Return 2D Bar Code Project

• We developed bar code technology to eliminate manual data entry errors.

Defence in depth (IT security)

• We use multiple layers (depth) of security controls (defence) to achieve the required level of security. If one control is bypassed or compromised, the other controls will provide additional protection.

USB/BitLocker

• BitLocker To Go, an encryption software has significantly reduced the risk of accidentally downloading data and password protects protected information.

Data Centre Co-Location Project

• About 30,000 cables and 1,000 pieces of hardware had to be moved between locations in a secure fashion within a specific time. A single error could have had a major impact, so we used a numbering system.

Guidelines for designing the risk out of the system

Building on our past successes, the Agency has developed **"the 5 RIGHT's"** to reduce the risk of errors occurring.

The Agency's 5 RIGHT'S	
The RIGHT controls	☑
The RIGHT knowledge	☑
The RIGHT communication	☑
The RIGHT contingencies	☑
The RIGHT planning	☑

It's all about the RIGHT balance

The 5 RIGHT's: Our prevention system

Guideline 1: The RIGHT controls

Are the right controls in place to reduce the risk of errors?
Are the processes well defined, communicated, and being followed?

Guideline 2: The RIGHT knowledge

Are employees aware of the impacts and consequences of errors occurring?
Do they have the right job training and receive it in a timely manner?
Is training refreshed or renewed on a regular basis? Are the right courses available?

Guideline 3: The RIGHT communication

Is there open and constant communication with employees at all levels (front line
employees and above) about error prevention?
When errors happen, are they communicated up?
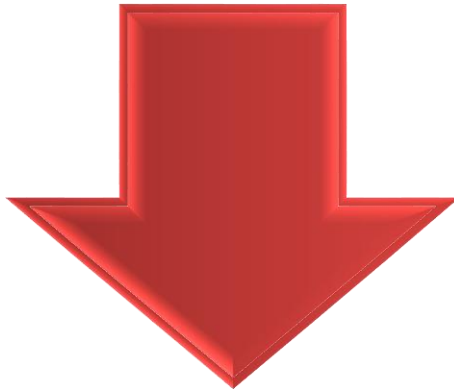
Guideline 4: The RIGHT contingencies

Are the appropriate plans in place at all levels of the organization in case an error occurs?
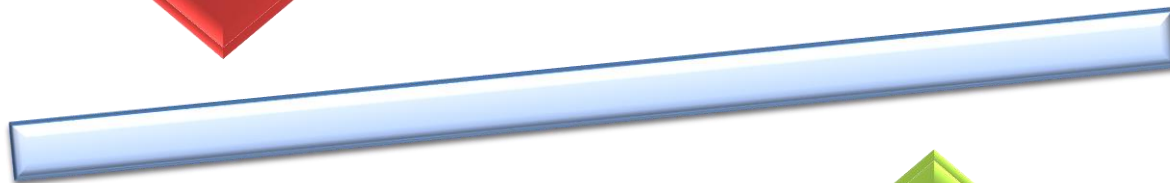Leverage best practices and solutions!

Guideline 5: The RIGHT planning
Are there plans in place for future continuous improvement for error prevention?
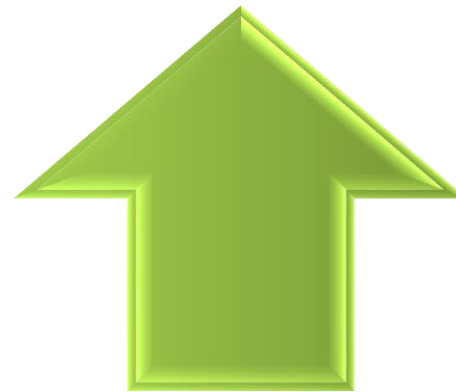
How do you know if you need to design risk out of the system in your area?

If you answer **yes** to all of the questions on the previous slide, the **likelihood** of an error could be **low.**

If you answer **no** to any of the questions on the previous slide, the **likelihood** of an error is **higher** and you could probably do more to prevent errors.

Moving forward

Simple solutions to enhance internal processes are possible!

- They should be easy to implement and maintain.
- They should not add extra layers that increase red tape or prevent employees from doing their job properly.

Awareness is important!

- Employees need to understand how important it is to prevent errors and what the impacts of errors are.

- They also need to communicate immediately when one occurs - timely communication provides the opportunity to contain the error and prepare a response, if required.

Lessons learned – simple solutions

- Avoid rushing when sending material. Make sure that information is correct, and allow time to react or respond if an error does occur.

- If using a template that is pre-set with specific dates, phone numbers, or other information, make sure the product goes through fact-checking (for example, call the phone number).

- Physically separate sensitive information and non-sensitive information (store or file it in different locations, folders or rooms).

As a manager, YOU can make the difference

Use the [checklist](#) to find out if your area is at risk of an error.

This approach will help you reduce the risk of error that can affect the Agency's reputation and operations.

Canada Revenue Agency