

Reducing Rework by Building Inclusion into Improvement Work

Integrating Inclusivity and Accessibility into DMAIC

Marie-Ève Gratton, Senior Business Improvement Analyst

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Before We Start: Raise Your Hand If...

Let's start with a quick question: how many of you have implemented a solution and then had to adjust it afterwards?



1

Redesign Required

You've had to adjust a solution after implementation.



2

Accessibility Feedback

You've received feedback that something didn't work for certain users.



3

Unexpected Resistance

You've seen adoption lower than expected after launch from specific groups.



4

Missed Insights

You've thought...
how did we miss that?

About Me



Illustration by killaristudioco



Current Role

Senior Business Improvement Analyst specializing in continuous improvement and transformational work.



Experience

Applying Lean, Six Sigma, and Agile methodologies in HR service delivery for Housing, Infrastructure and Communities Canada.



Collaborative Approach

Partnering with leaders and teams to design changes that are adopted, sustained, and create lasting organizational impact.



Inclusion Focus

Increasing focus on integrating Gender-Based Analysis Plus (GBA+), accessibility standards, and inclusive design principles into all my work.

The Objective

This session explores how to integrate inclusion and accessibility into your existing DMAIC approach.



Small Adjustments, Big Impact

Strategic check-ins at each DMAIC phase to prevent late-stage issues.

Design for Everyone

Solutions working for all user groups, supporting fairness and equity while reducing rework.

Enhance, Not Replace

Simple practices to reveal hidden barriers early, providing sustainable improvement.

Core Concepts



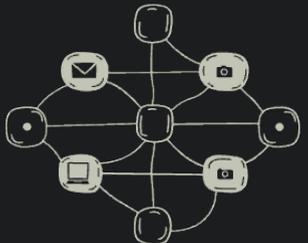
Gender-Based Analysis Plus (GBA+)

A framework that helps us understand variation in how people experience a process or service.

It pushes us to test assumptions about the “typical user” before we design solutions.

Key Question

What differences might affect how people experience this?



Intersectionality

Recognizes that people’s experiences are shaped by multiple factors at the same time, not just one.

A few examples:

- Ability
- Culture
- Language
- Age
- Gender
- Work context

Key Question

Are different factors combining to create unique barriers?



Accessibility

Ensuring people can access, understand, and use a process effectively.

Barriers can come from:

- Technology and procedures structures
- Communication and literacy
- Cognitive differences
- Physical environments

Key Question

What might make this harder for some users to access or use?

The Pattern We Need to Break

When was the last time a “finished” solution came back because it didn't work for remote employees, non-technical users, or people using assistive technology?

What We Do Well

- Improve efficiency and reduce bottlenecks systematically
- Streamline processes using proven methodologies
- Deliver measurable, data-driven results

What Gets Missed

- Inclusive and Accessibility considerations from the start
- Diverse user needs and accessibility requirements + their impacts
- Inclusive design principles embedded directly in solutions

The Problem

Designing for the “typical” user can overlook important differences in how people experience a process, creating barriers and unintended inequities that often surface later.



The Result

Late inclusion forces teams to retrofit solutions, increasing cost and delays. Beyond efficiency impacts, unintended exclusion can also mean people cannot fully access services intended for them.

Current Gaps

We optimize processes effectively, but we don't always see variation in user experience.

Limited Engagement

Are you mostly hearing from the same voices in workshops and sessions?

- Workshops often include those most available or comfortable speaking.
- Barriers remain invisible until later or never surface while users struggle.

Data Gaps

Is your data showing **what** happens but not **why** or to **whom**?

- Metrics show volumes and timing, not user differences.
- Little insight into who experiences delays or errors.

Late Accessibility Checks

When do we consider accessibility?

- Assumptions about user ability go untested during design.
- Changes become more complex once solutions are built.

Missing Human Factors

Are we mapping steps or experiences?

- Process maps show systems perspective, not human challenges.
- Human experience and context can be overlooked.

Evidence: Why Early Integration Works

OECD Research

The Organisation for Economic Co-operation and Development Research shows the impact of early inclusion:

- Early integration reduces barriers and improves participation
- Prevents exclusion before implementation
- Retrofitting accessibility later costs **3–5× more** than building it in from the start

Accessible Canada Act Progress Report

Canada's accessibility reporting Canadian accessibility reporting shows the benefits of early planning:

- Better usability and user experience
- Fewer complaints and barriers after launch
- Higher satisfaction and adoption

 For improvement work, this means: Fewer corrections during the Improve and Control phases of DMAIC, faster realization of benefits, reduced project risk, and solutions that work for a broader range of users from day one.

Inclusive DMAIC - Define



DEFINE PHASE

What to Add

- Identify diverse user groups and equity impacts early using a GBA+ framework (examining how user characteristics and contexts influence experience).
- Map accessibility needs across physical, digital, and cognitive interactions.
- Include people who directly experience the process when defining the problem.

How?

- Expand stakeholder mapping or SIPOC to include different user conditions.
- Run a barrier walkthrough of process steps using an accessibility checklist (physical, digital, cognitive).
- Validate the problem statement through targeted short user interviews (ex.: Voice Of) before finalizing scope.

Why?

Avoids late surprises. Identifying different user needs early prevents teams from restarting analysis or redesigning solutions later.

Time Investment

~30 minutes upfront can prevent rework later.

Missing user needs discovered during implementation leads to redesign, delays, and frustration.

Inclusive DMAIC - Measure



MEASURE PHASE

What to Add

- Measure performance across different user conditions to detect variation.
- Capture where delays, errors, or rework occur in the process and are concentrated for certain users.
- Validate assumptions with data and targeted observations.

How?

- Segment existing metrics by user context where possible (ex.: role, experience level, region, access context).
- Compare performance patterns between user groups (the twist here is for whom is performance different, and why?).
- Observe or validate the process with diverse users to confirm what the data shows.

Why?

When performance is only measured overall, problems affecting specific users remain hidden. Solutions built on incomplete data often fail during implementation, creating rework and delays.

Time Investment

~30–60 minutes analyzing variation can prevent redesign caused by incorrect root cause assumptions.

Inclusive DMAIC - Analyze



ANALYZE PHASE

What to Add

- Validate root causes across different user conditions, not only overall trends or data.
- Consider user context and accessibility factors as potential contributors to performance issues.
- Confirm that proposed causes explain variation observed in Measure.

How?

- Compare root cause patterns across user groups identified in Measure.
- Add user context factors into existing tools (ex.: fishbone categories, journey maps etc.). Inclusion becomes part of normal analysis and not an extra step.
- Validate hypotheses with targeted user feedback before design.

Why?

Root causes confirmed using only one perspective may not explain problems for all users. If causes are incomplete, solutions will require adjustment or redesign during implementation.

Time Investment

~30–60 minutes validating causes across user conditions can prevent redesign when solutions fail for certain users later.

Inclusive DMAIC - Improve



IMPROVE PHASE

What to Add

- Design solutions that work across different user conditions, not only the majority case.
- Ensure solutions are validated with representative users before full implementation.
- Include accessibility and usability considerations as part of solution decision criteria.

How?

- Add usability and accessibility criteria into solution selection tools (ex.: decision matrix).
- Include varied users in pilots or prototypes before scaling.
- Adjust communication and tools based on feedback before launch (ex.: Simplifying instructions reduces errors and support requests).

Why?

Solutions that work for most, but not all users often require adjustment after implementation. Early testing prevents rework, delays, and stakeholder frustration.

Time Investment

You're already testing and piloting solutions. 😊

Including diverse users typically requires minimal additional effort while preventing costly redesign later.



Inclusive DMAIC - Control

🔍 CONTROL PHASE

What to Add

- Monitor performance across different user conditions, not only overall data.
- Include accessibility and usability considerations in control plans and Standard Operating Procedures (SOPs).
- Maintain feedback mechanisms to detect emerging barriers over time.

How?

- Track key metrics by user context where feasible.
- Add inclusion checks into control plans, huddle, or reviews.
- Maintain simple user feedback channels post-implementation.

Why?

Processes often drift over time. Without monitoring variation across users, barriers can reappear.

Time Investment

Added considerations during control reviews can prevent recurring problems and repeat improvement cycles later.



Building inclusion and accessibility into DMAIC is not about adding work. It is about **prevention**.

- Define: Prevent wrong assumptions
- Measure: Prevent incomplete visibility
- Analyze: Prevent incorrect root causes
- Improve: Prevent solution redesign
- Control: Prevent regression and repeat projects



Fictional Scenario: Leave Request Process

What difference could inclusive DMAIC really make?

Two Approaches, Different Outcomes

Traditional DMAIC Approach

Initial Results

- Reduced processing time by 40%
- Streamlined approval workflow and process
- Automated system and notifications

Inclusive DMAIC Approach

Same Efficiency Results

- Reduced processing time by 40%
- Streamlined approval workflow and process
- Automated system and notifications

But Then Reality Hits...

- ✗ Screen reader users couldn't submit requests independently
- ✗ Mobile users had significantly higher error rates
- ✗ Some employees struggled with the system language and acronyms
- ✗ Part-time employees missed system notification windows
- ✗ Managers assumed the digital literacy that some employees didn't have

Inclusive Design Benefits:

- ✓ Accessibility requirements for screen readers identified during Define
- ✓ Mobile and device usage patterns captured in Measure
- ✓ Plain language tested with diverse users in Analyze
- ✓ Flexible system notifications adapted to schedules designed in Improve
- ✓ Alternative submission options available from Control

Traditional DMAIC Approach

Outputs

- Post-launch redesign and testing required
- The team is handling manual requests, creating backlogs
- Some employees unable to access the system independently
- Workarounds developed outside the process
- Risk of grievances and accessibility compliance issues

Inclusive DMAIC Approach

Outputs

- No redesign required after launch
- Minimal manual processing across teams
- Employees complete requests independently
- Process used consistently across user groups
- Adoption consistent from the start

✘ Outcomes

- Results delayed due to rework cycles
- Increased workload and costs shifted to operations
- Unequal access to the process across employees
- Lower confidence and trust in the system
- Higher operational and compliance risk

✔ Outcomes

- Results realized as planned
- No additional workload transferred to operations
- Equitable access across employee groups
- Higher confidence and trust in the system
- Reduced operational and compliance risk

Overcoming Common Challenges

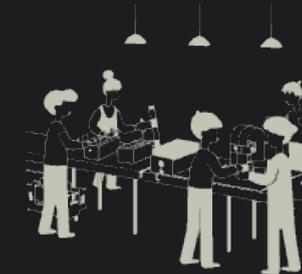
" This sounds great in theory, but I'm already at capacity with competing priorities and tight deadlines. "



"This is going to slow our projects down"

Solution: Integrate a short inclusion and accessibility check into the checkpoints and add to the tools you already use, rather than adding new steps.

Time Investment: Initial integration takes some focused effort. Once embedded, these are activities and exercises you already do and run.



"Our team lacks experience with inclusion analysis"

Solution: Use available resources and grow expertise over time through experience and shared learning.

Examples:

- Invite someone with expertise to one discussion
- Share lessons learned across the team
- Inclusion insights in postmortem debriefs

Time Investment: Small learning moments over time that quickly build team confidence and expertise

Other Common Challenges



"We don't have demographic or user experience data"

Solution: Add inclusion questions to your feedback and piloting sessions you already do instead of creating new steps.

Examples:

- Was anything difficult to access, read, or understand?
- Could someone complete this using assistive technology?
- Who might experience this differently?

Time Investment: No extra time.

Just small adjustments to existing discussions.



"It's valuable, but we have competing priorities."

Solution: Treat inclusivity and accessibility as part of quality and risk validation during key DMAIC decisions, not additional work.

Examples:

- What assumptions are we making about users?
- Could variation across user groups affect outcomes?
- Where might failure demand emerge after launch?

Time Investment: A few minutes during decision points that help prevent rework and delays later.

Questions I've Faced About Integrating These Practices

"Isn't this just compliance checking?"

It's compliance *plus* better design.

Compliance Only

- Meet requirements
- Avoid risk



Inclusive Design

- Works for more users
- Fewer support needs
- Higher adoption

"What if we don't have diversity in our user base?"

You do, it's just not always visible.

- Age and experience levels
- Literacy, language, and cognitive differences
- Digital skills and technology access
- Work environments and roles

"Where do I even start?"

Start with two questions:

- Who might experience this differently?
- What barriers might exist?

Then learn and adjust over time. You don't need to be an expert, just curious and willing to ask and learn.

"What if leadership doesn't see the value?"

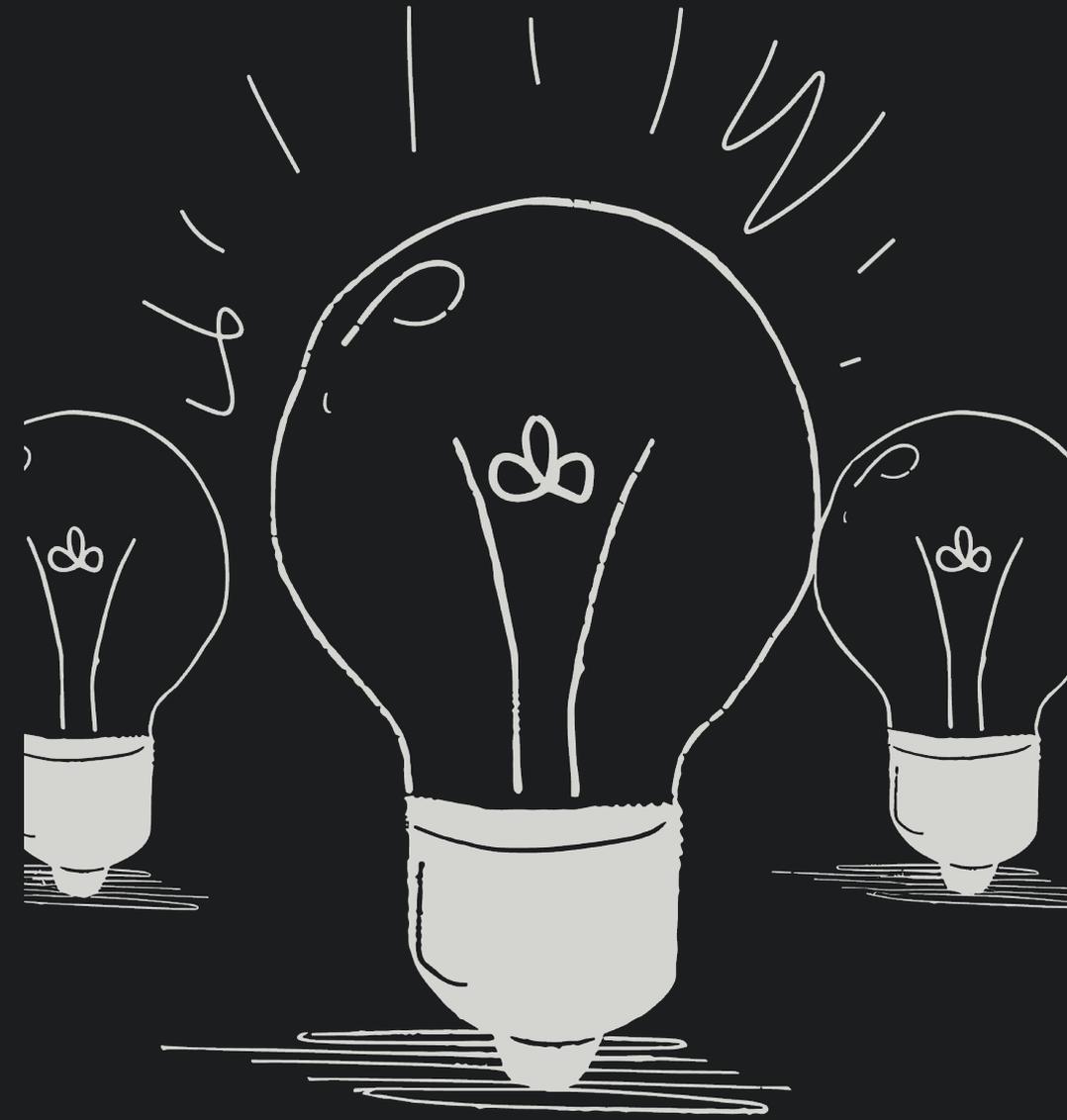
Frame it in language they care about:

- Risk and compliance
- Time and efficiency
- Adoption and outcomes
- Cost and workload

Leadership doesn't resist inclusion. They resist unclear value.

Let's Learn From Each Other

Let's take a moment to reflect
on your experience.



Want to Learn More?



GBA+ Resources

- [Gender-based analysis plus \(GBA Plus\) course](#)
- [Gender-based Analysis Plus resources](#)
- For GoC public servants: courses through Canada School of Public Service.

Some suggestions:

- [Inclusive by Design \(DDN223\)](#)
- [Moving from Bias to Inclusion \(INC123\)](#)
- [Addressing Disability Inclusion and Barriers to Accessibility \(INC115\)](#)



Accessibility Resources

- [Accessible Canada Act and annual Progress Reports](#)
- [Web Content Accessibility Guidelines \(WCAG\) standards](#)
- [Digital Accessibility Toolkit](#)



Practical Tools

Some tools I've developed and used in projects:

- Inclusive and accessibility kickoff checklists
- Accessibility tools
- Inclusive DMAIC integrations etc.

Happy to share templates, please reach out after the session! ☺

Thank You

Questions? Let's continue the conversation about making continuous improvement work for everyone.

[Chat with me in Teams!](#)

[Or send me an email :\)](#)