

Automatic BIM Standards Checking in BIM360

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Varun Bhartiya

CEO, and Co-Founder of nCircle Tech

I established this organization to **enable passionate innovators in the AEC and Manufacturing industry to create impactful 3D engineering & construction solutions.** Leveraging our domain expertise in CAD-BIM, **we provide solutions that reduce time to market and meet business goals.** Each of our CAD and BIM software solutions is meant to **provide you ease, convenience, time and cost saving so that you can focus on things that matter more.**

Why Check BIM Standards

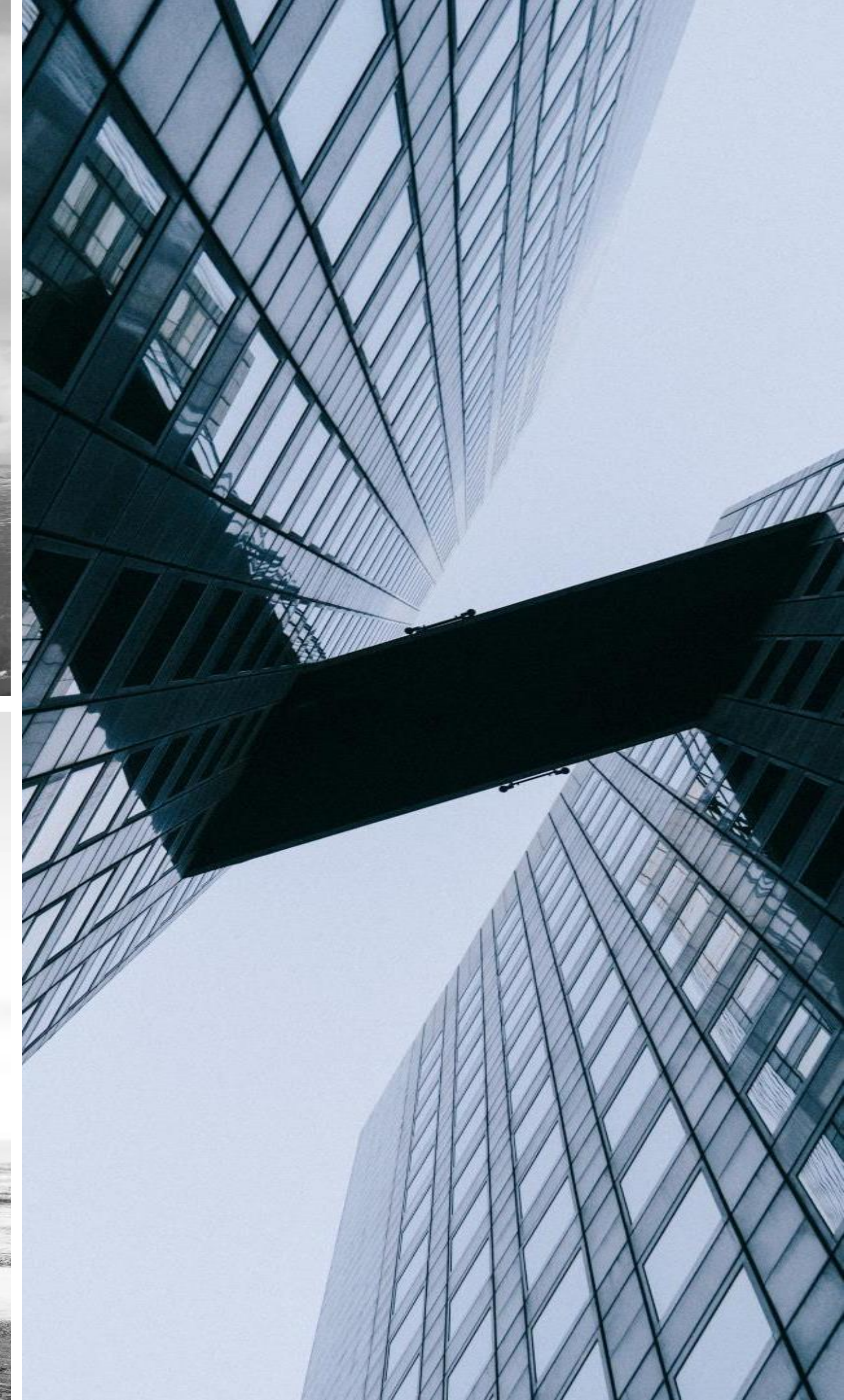
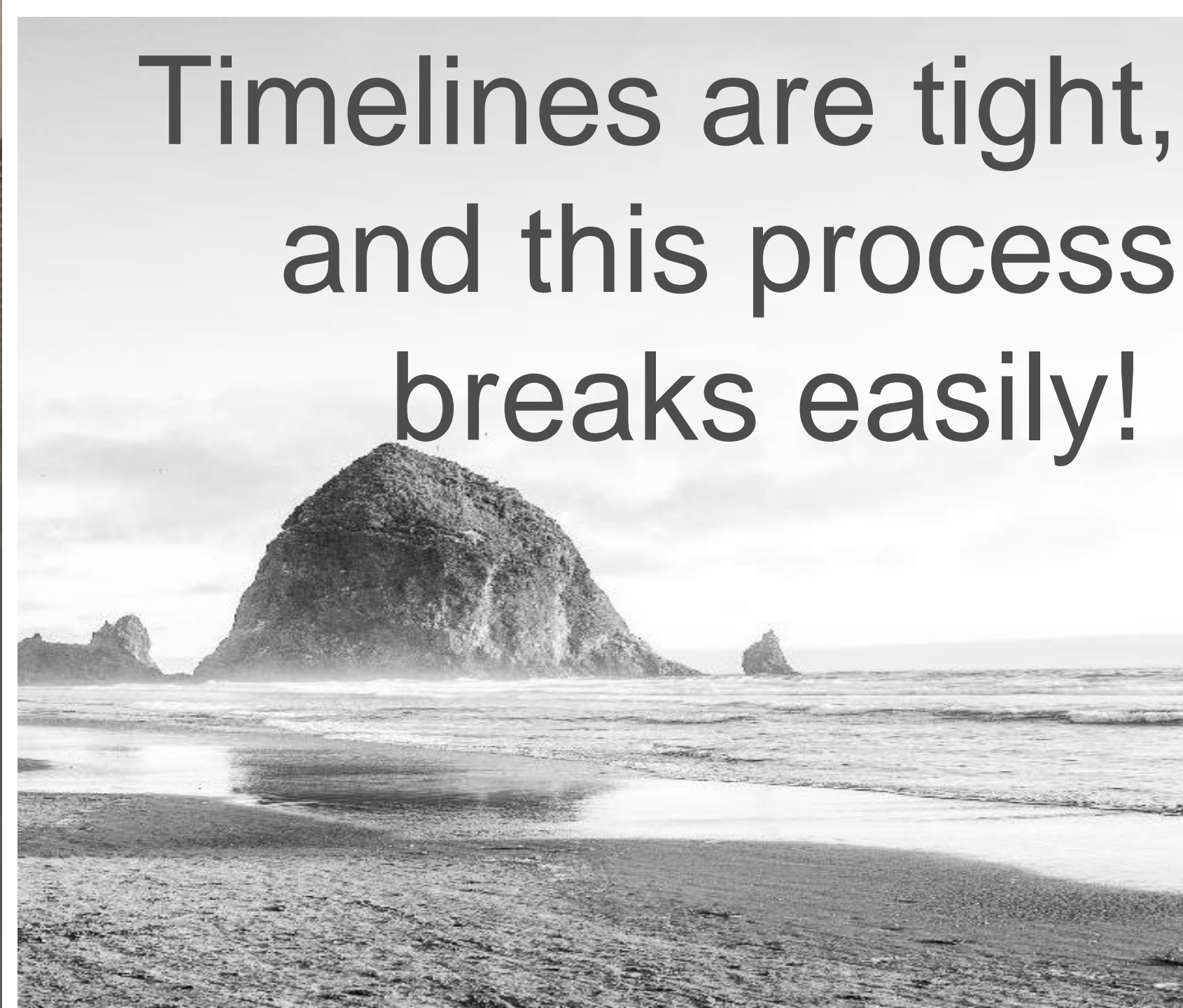
We all know why Model checks, BIM Standards Checks, and Code Compliance Checks are important

- Reduce the iteration time
- Reduce rework
- Better collaboration
- More money in your pockets



How do I implement
these in my company?





I believe in changing
the process rather
than changing the
culture of people



Learning Objectives

LEARNING OBJECTIVE 1

Discovering innovative workflows for automatic BIM standard checking in BIM360

LEARNING OBJECTIVE 2

Understanding how BIM standards can be checked through a set of computer programs instead of manual checking

LEARNING OBJECTIVE 3

Learning about better collaboration across disciplines and roles, including design professionals, MEP engineers, and others

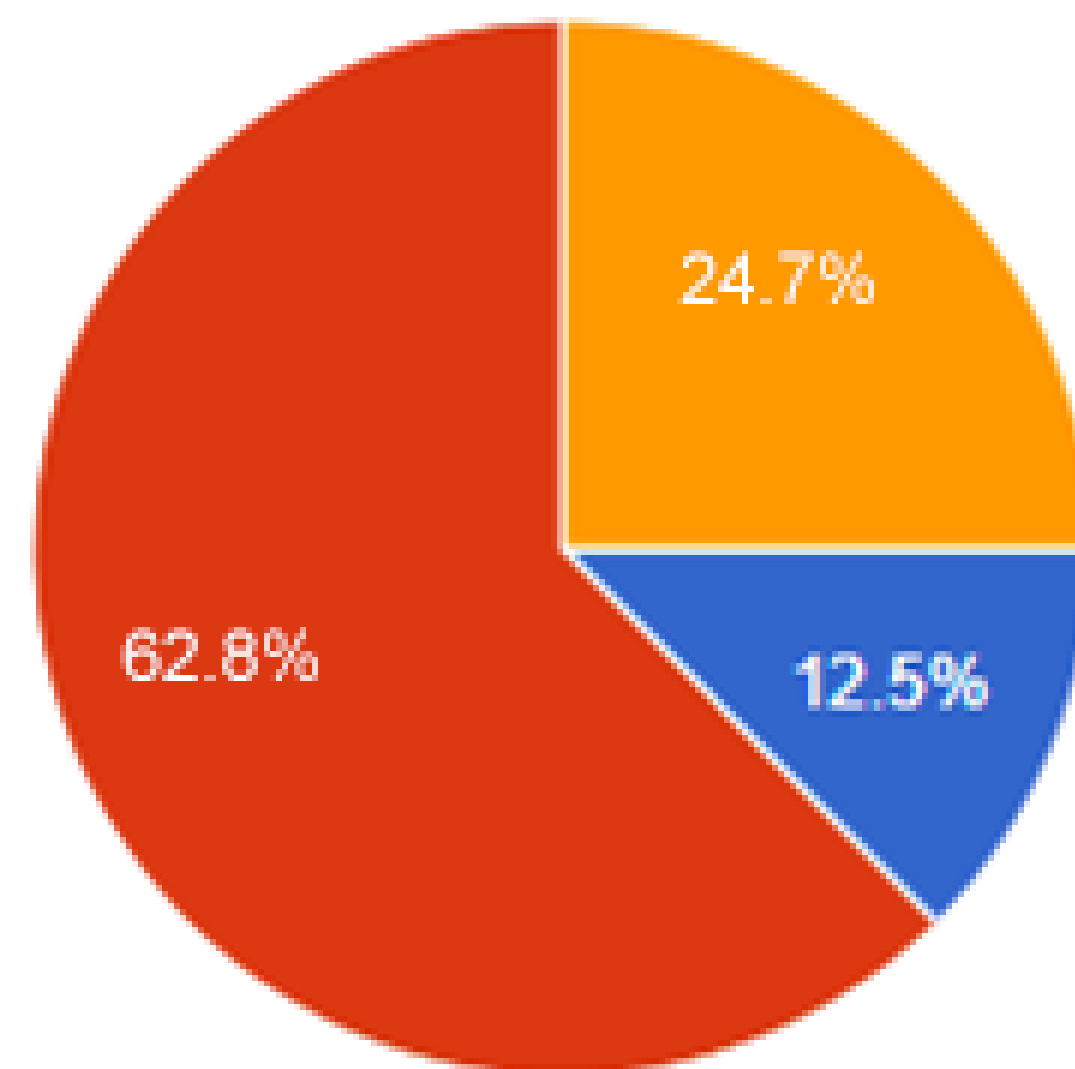
LEARNING OBJECTIVE 4

Discover some of the best practices in BIM standards



Insights

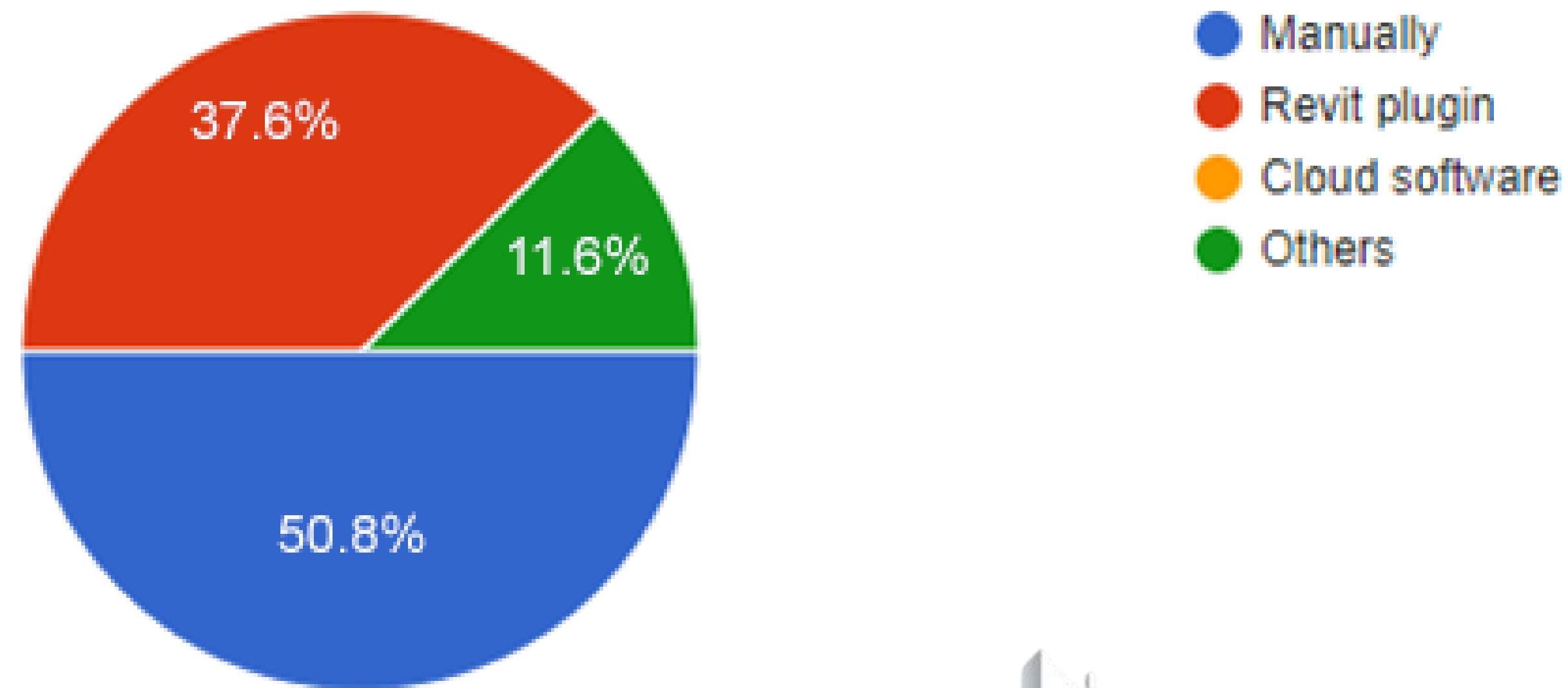
Are BIM Standards being followed and implemented in your projects?



- Followed 100% All rules are checked
- Followed, but needs improvement
- Need significant improvement
- Not followed

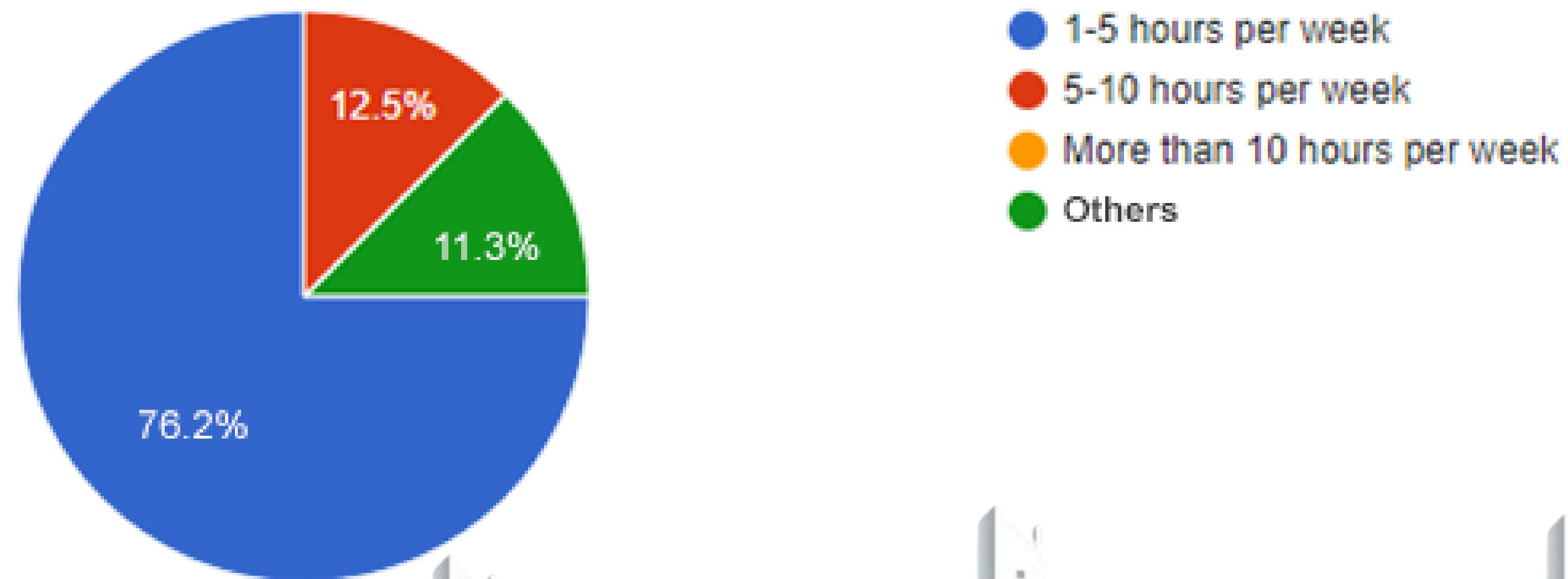
Insights

How do you check these standards or rules currently?



Insights

How much time is spent on an average on BIM Standards checking?



Insights

MOST TIME-CONSUMING CHECKS

- Geometrical checks
- Data import and validation
- Family name, type & parameters
- Alignment of origin of linked files



How will you change the game

**REDUCE
DEPENDENCY**

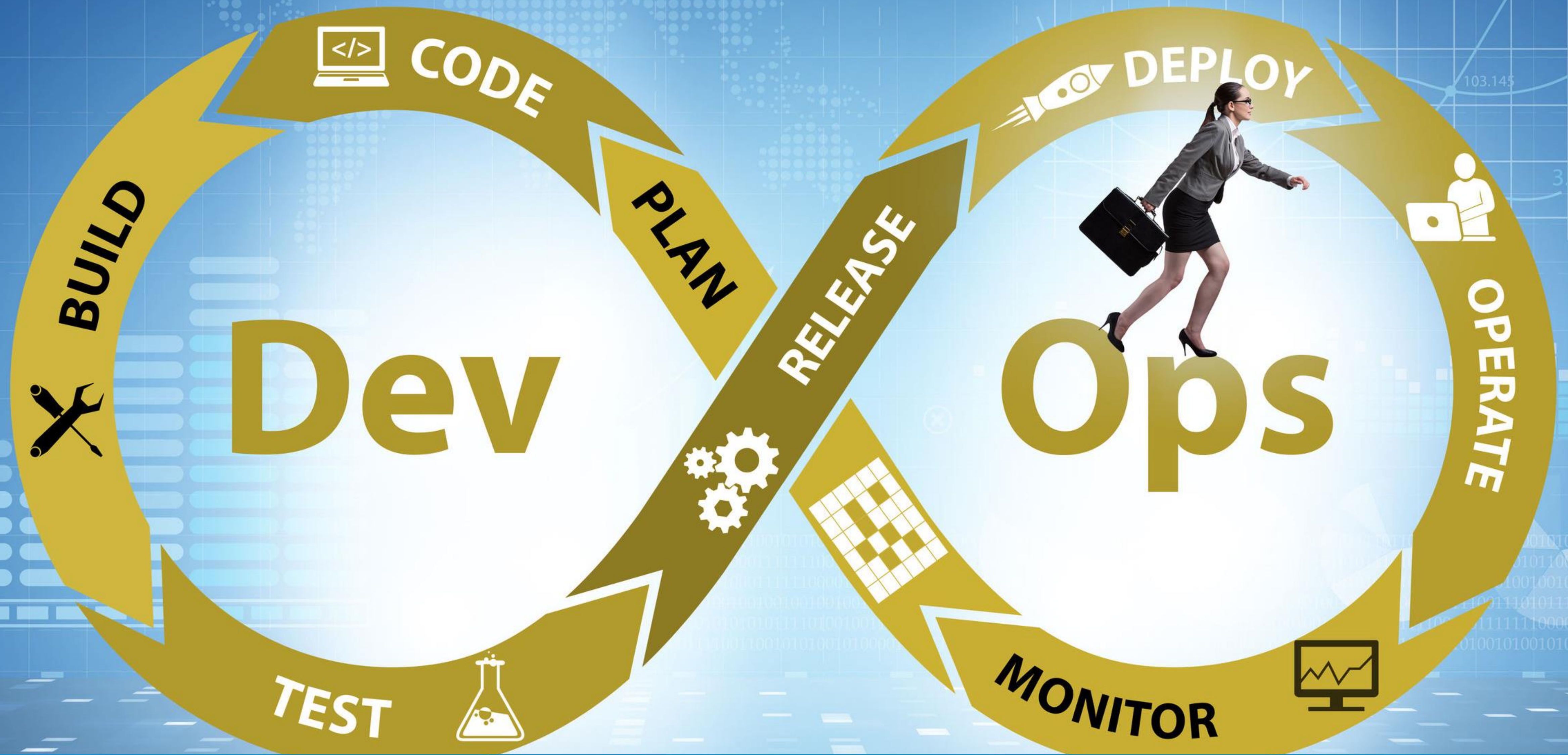
on manual checking
and human expertise

**CHECK
ON TIME**

every time without
adding any
overheads



“We can
achieve
these results
by making a
**very small
Change** in
the process.”



In software development, as soon as any line of code is changed, there are a series of checks that run on the entire application, to check for any regressions, code quality, unit test, integration test, etc.

Great innovations happen
when you take ideas
from one domain and
apply it creatively in
another domain!

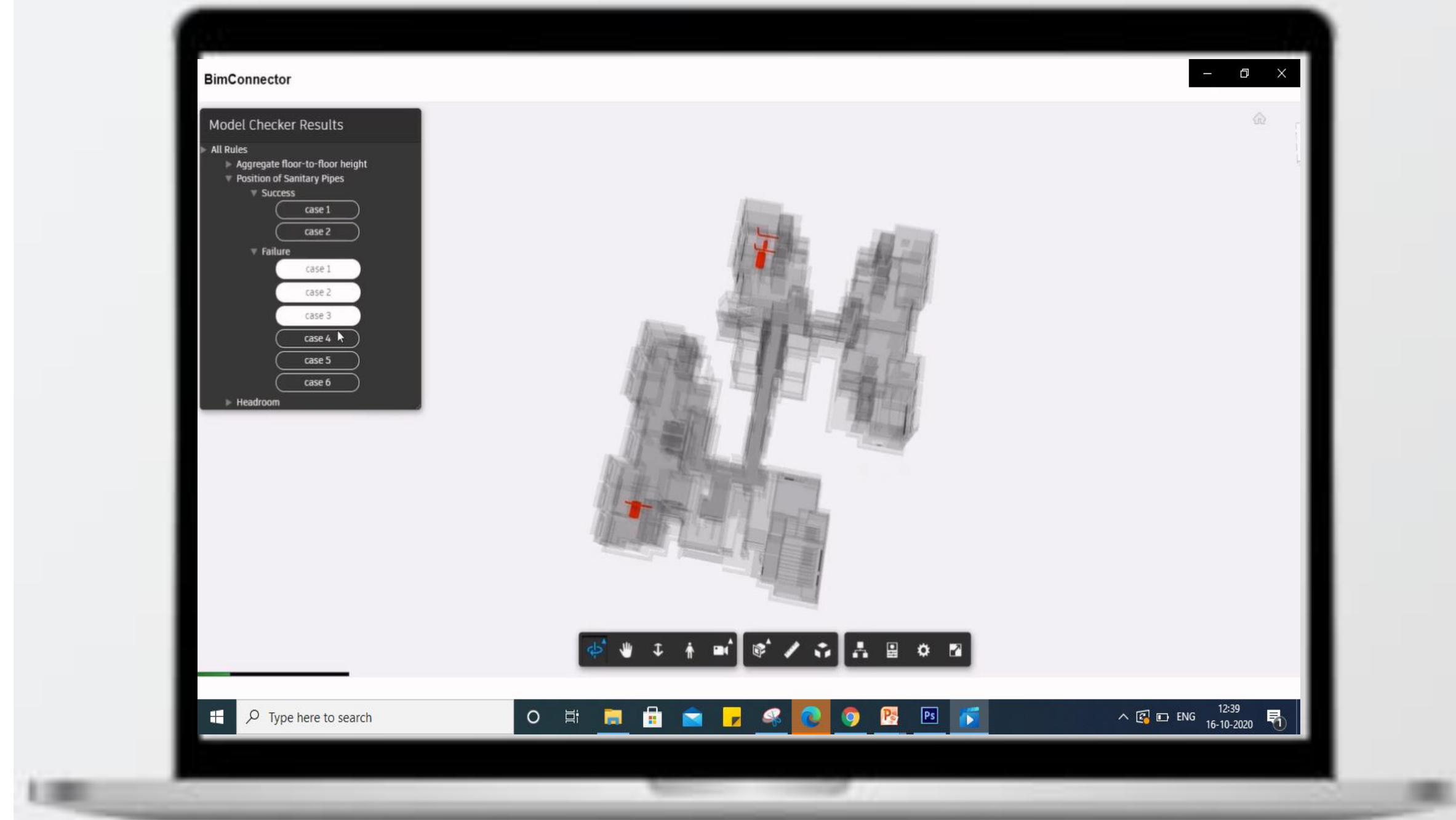


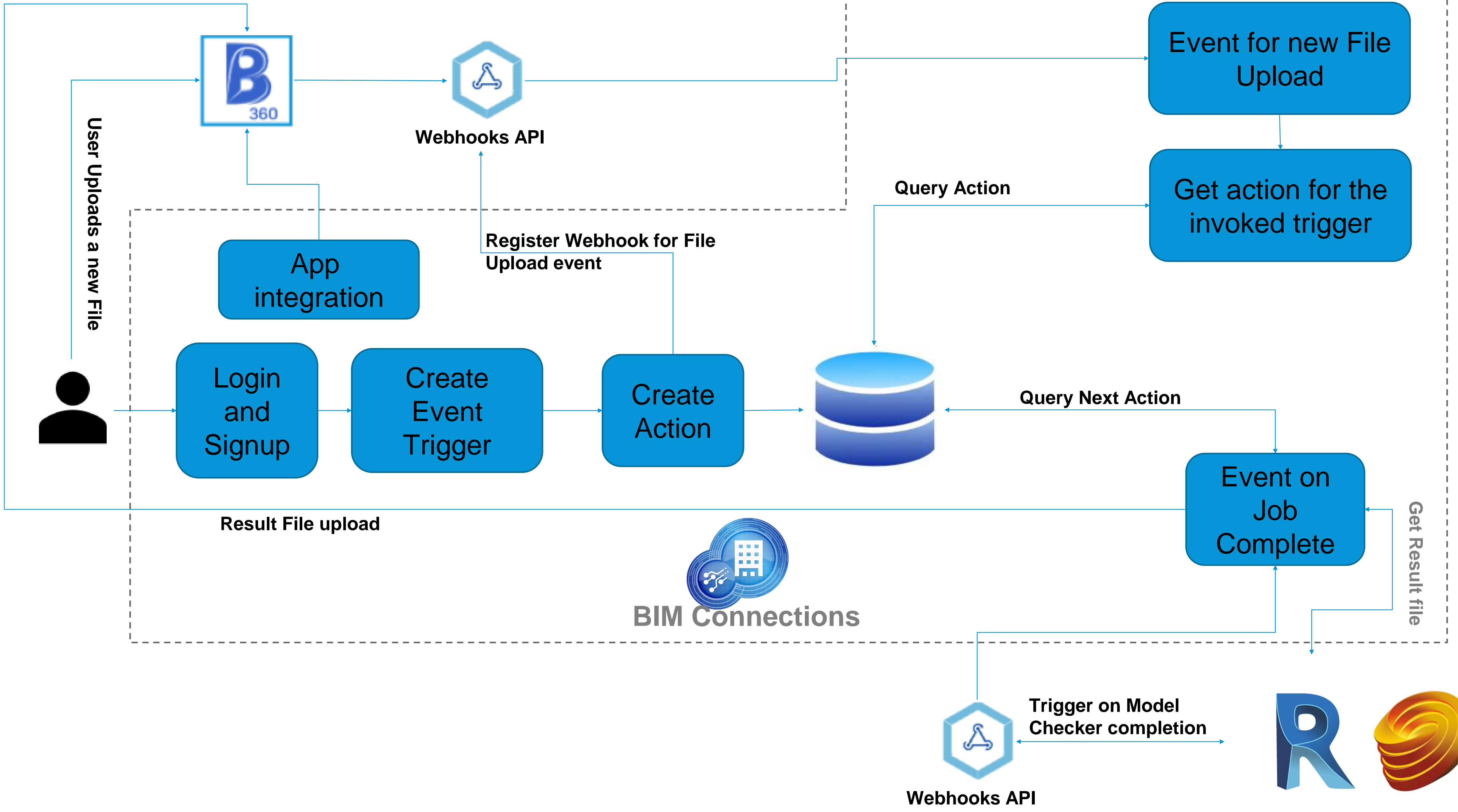
How is it done?

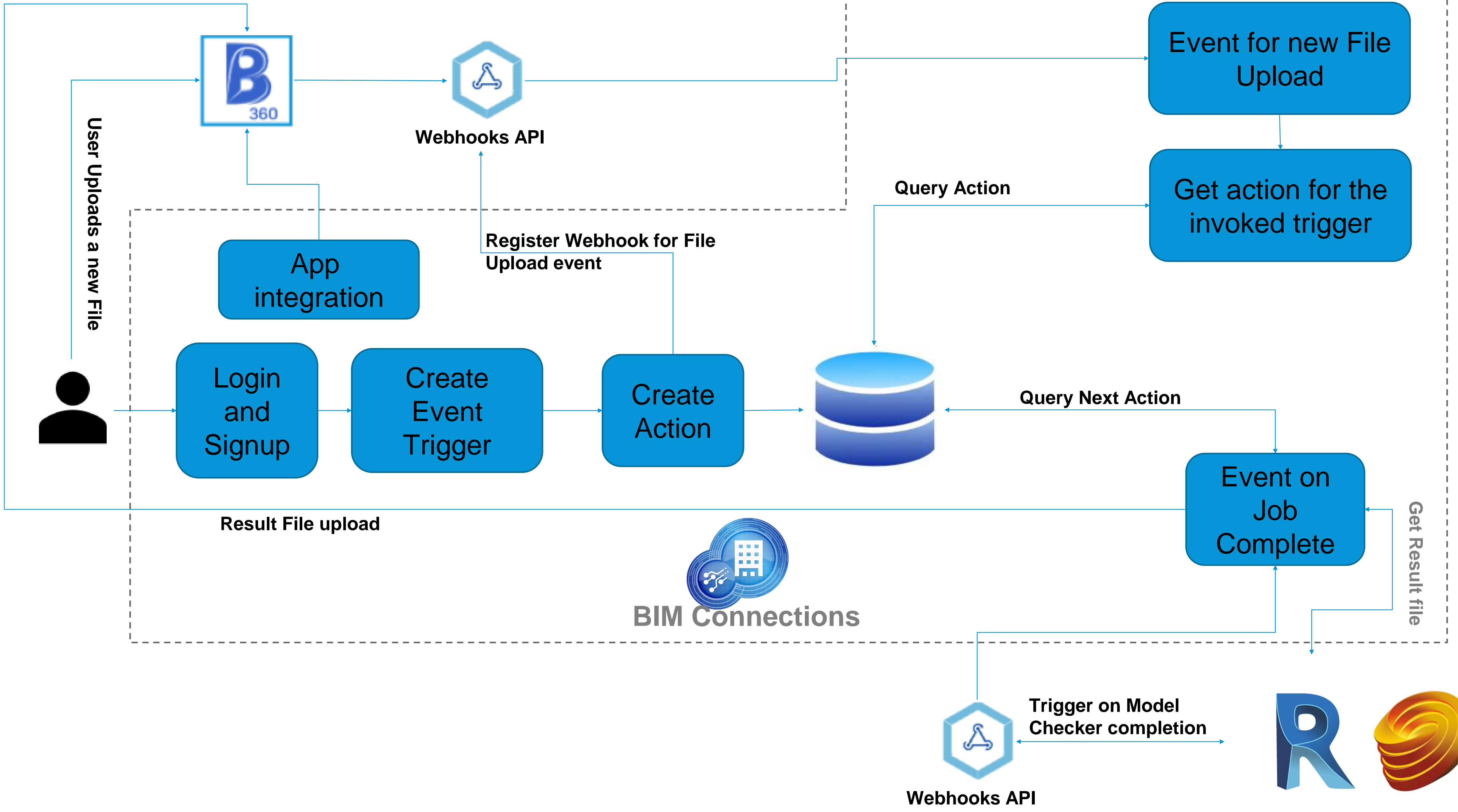
We have automated the process of checking BIM standards in the building design within BIM360 software.

- Perform automatic rule checks in the building design uploaded or modified in BIM360
- Summary of check results is automatically sent over email
- View the file in Forge viewer

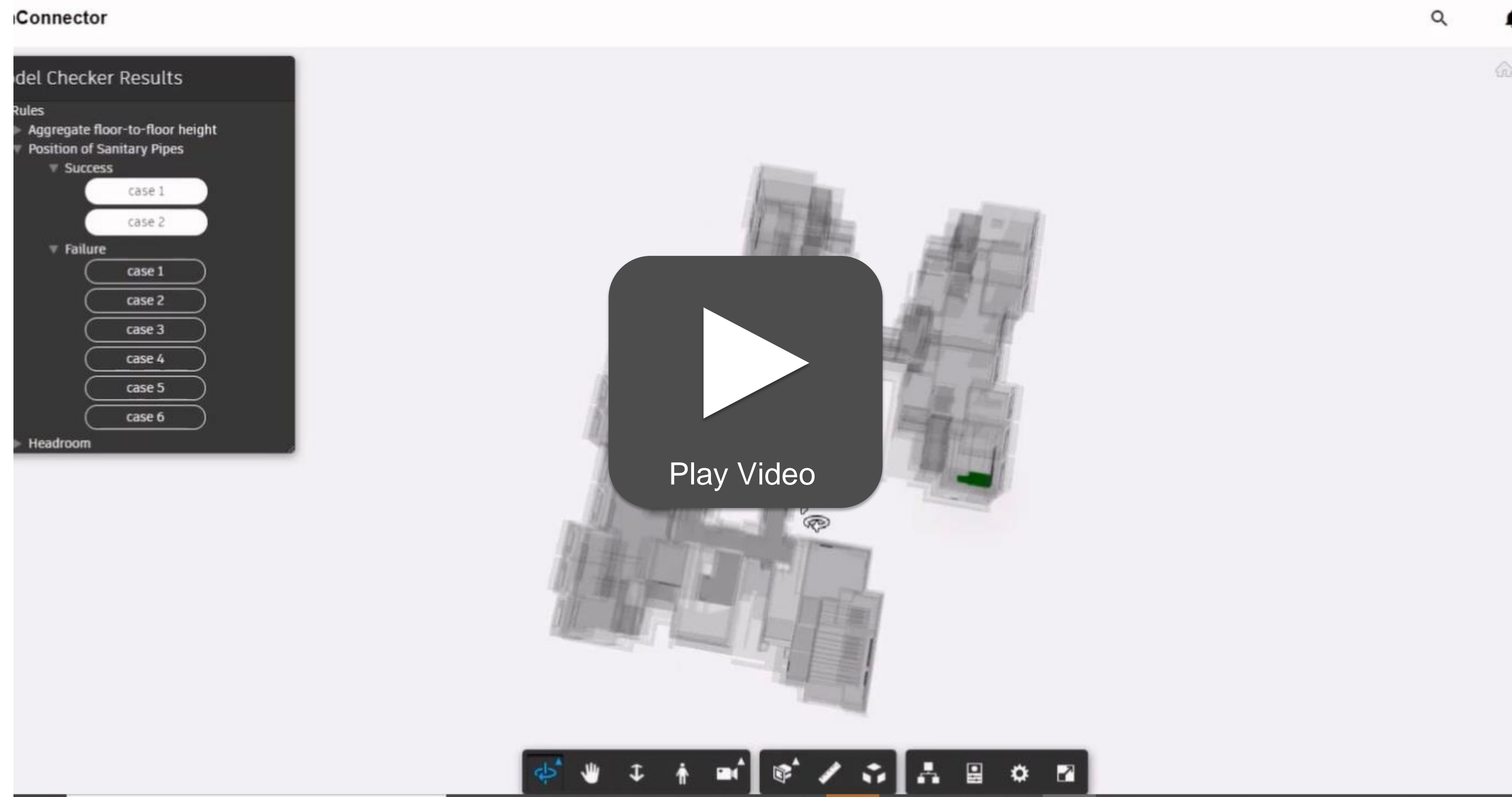
With the help of







Let's See The Magic In Action



*...because **Videos** are better understood than **Visuals**!*



Learning Objective 1

Discovering innovative workflows for automatic BIM standard checking in BIM360

What did we accomplish in this workflow?

- Lesser time to check model designs
- Accuracy in checks
- Negligence ruled out
- No manual dependency or intervention
- One time configuration





Learning Objective 2

Understanding how BIM standards can be checked through a set of computer programs instead of manual checking



Learning Objective 3

Learning about better collaboration across disciplines and roles, including design professionals, MEP engineers, and others

When the Design meets
protocols, it implies a Design that
complies to the BIM Standards



Let's take an example



It is one thing to
know the tools
and another
to know its rules!





Learning Objective 4

Discover some of the best practices in BIM standards

Best Practices For Your Automation

Who should run the rule checker?
Everyone!

Identify rules that can be
machine checked and
cannot be machine checked



Check frequently

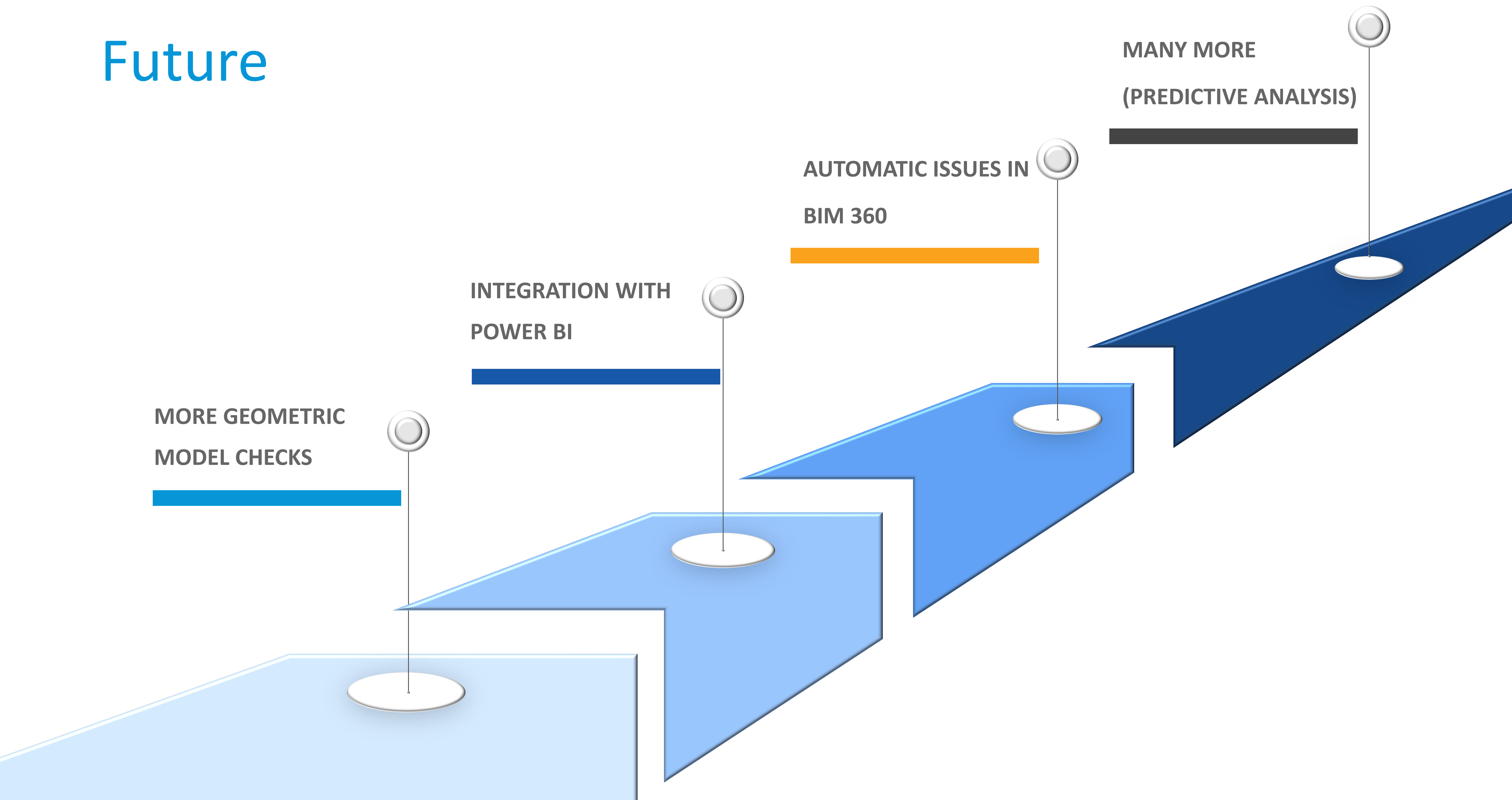
Check automatically

Report immediately

Correct immediately



Future



Automation is to your time
what compounding interest
is to your money.

~Rory Vaden



Let's Embrace Automation





Thank you!



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