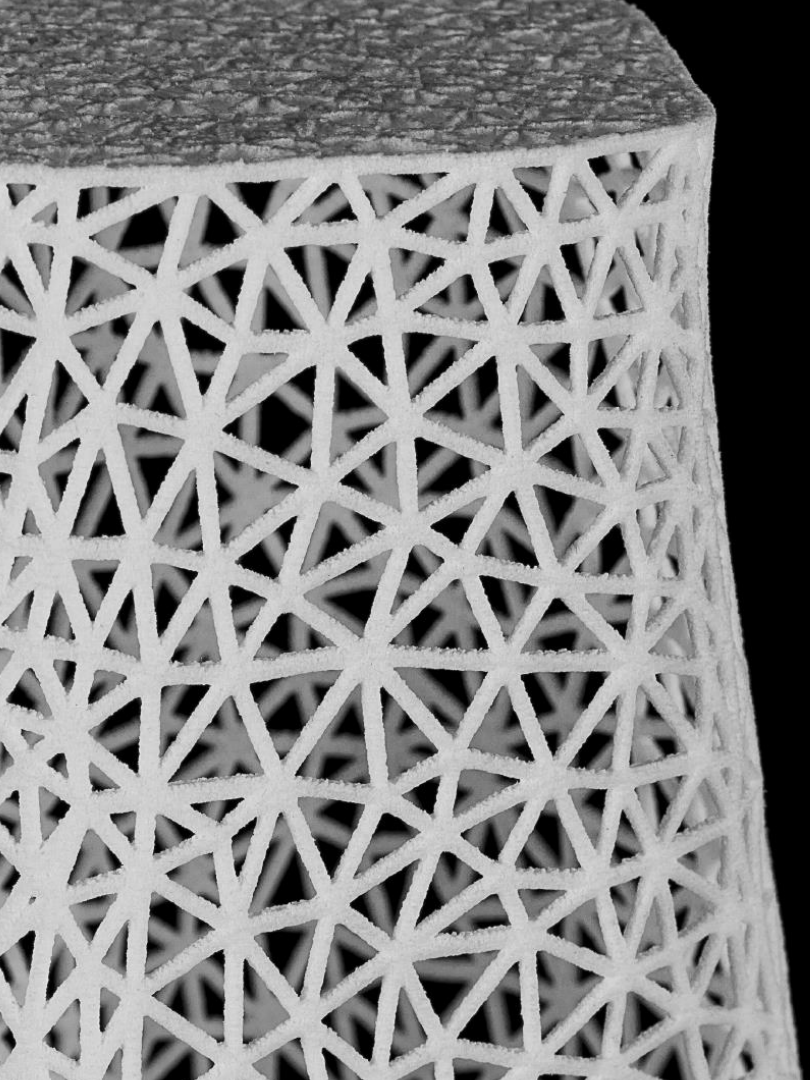

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Materialise Inspector

Take control of your process and part quality

What do you think?

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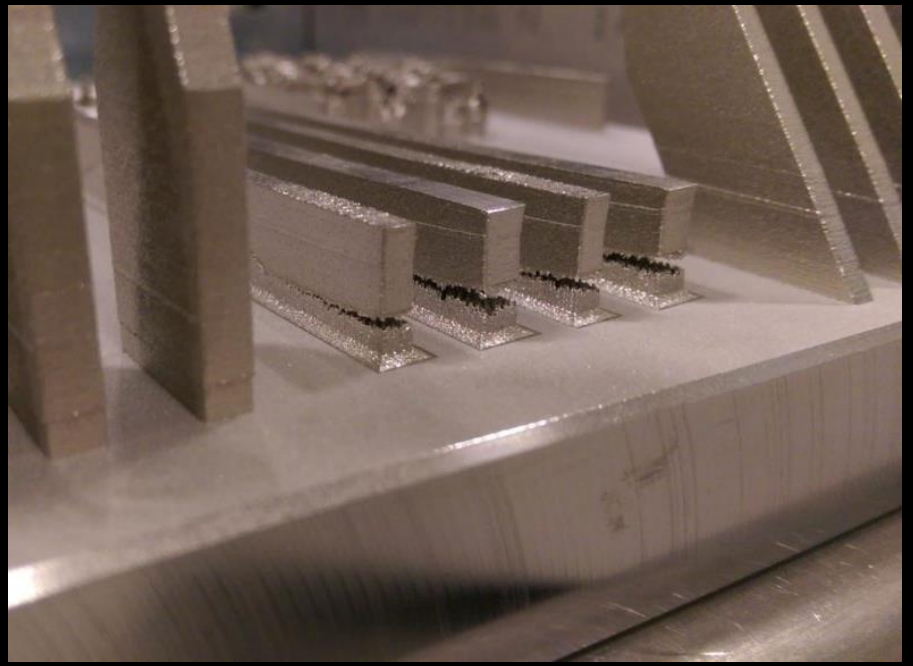

and now ...

What do you see?

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and now ...

Take Control of the AM Process

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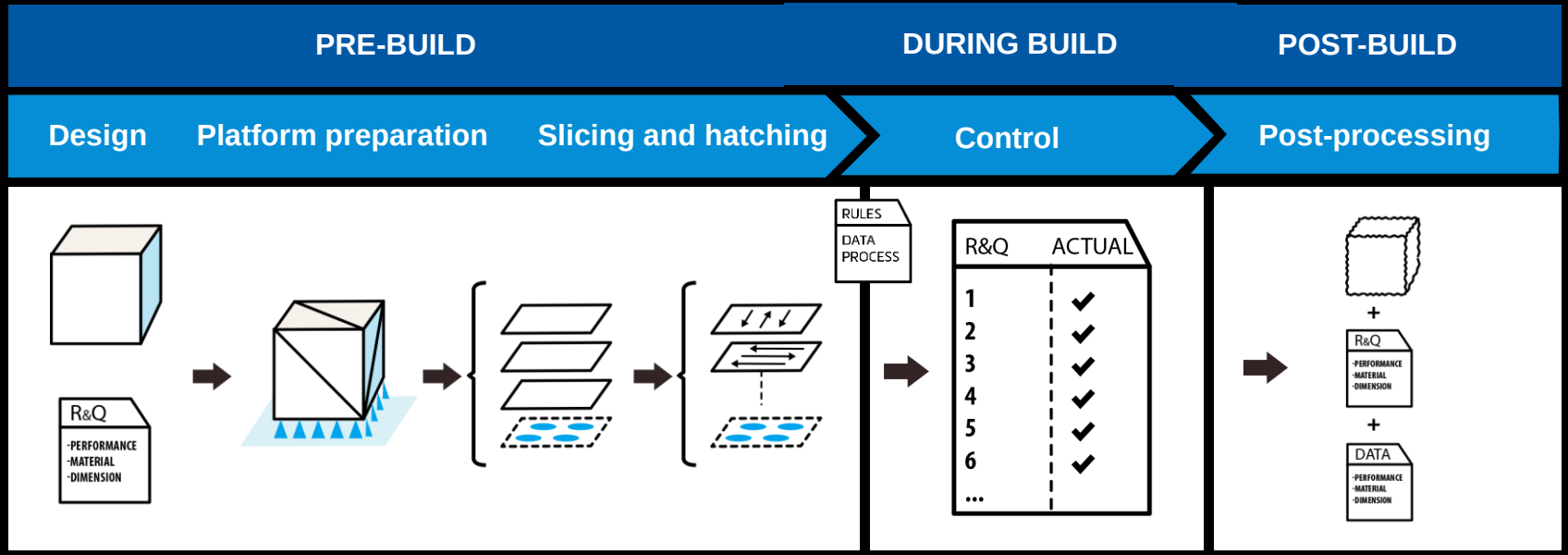

Taking Control of Your AM Process

Why Materialise Inspector?

Materialise Inspector is a tool that allows you to analyze the data coming from all stages of the process from 3D data preparation to finished part in order to improve and guarantee the quality, and therefore:

- Increase confidence in the quality of the (to be) printed part
- Minimize effort to predict and detect errors and perform a root cause analysis to save time and material
- Facilitate or enable research on e.g. print styles and their effects

The Truth about AM Is Buried in Data!

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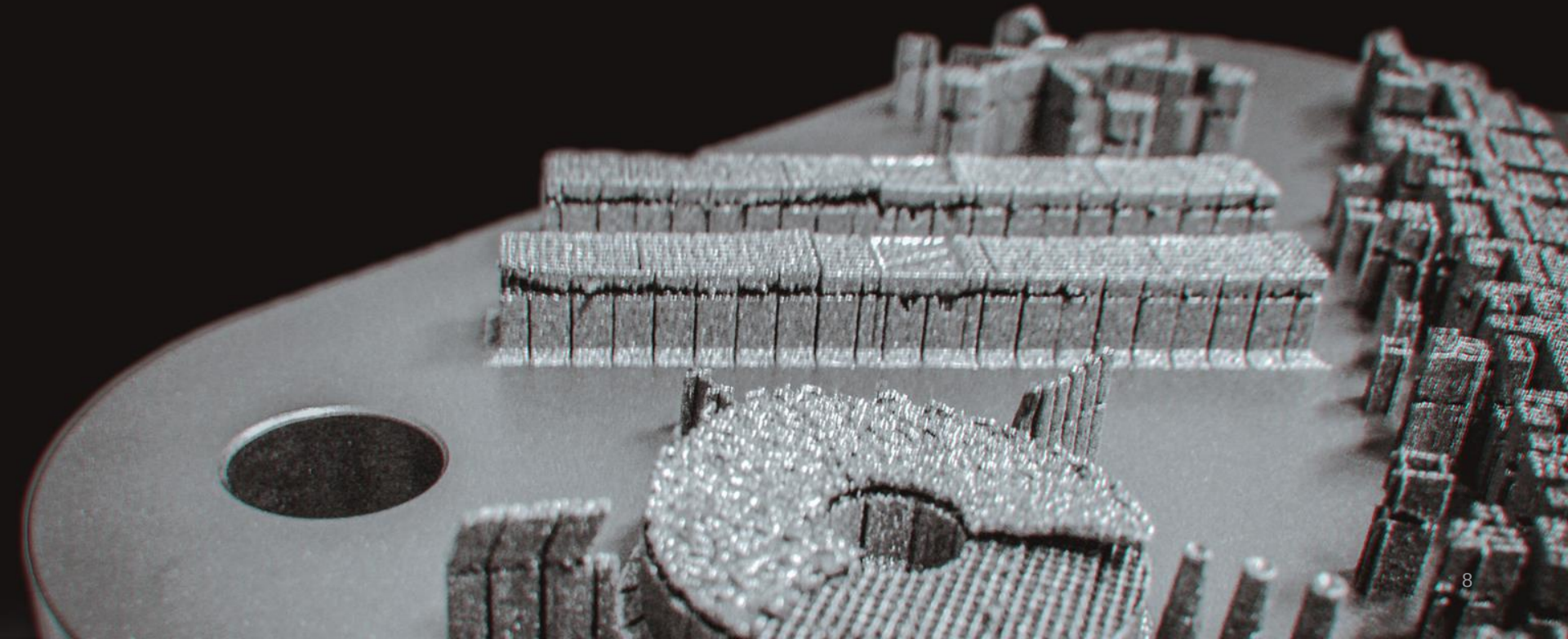


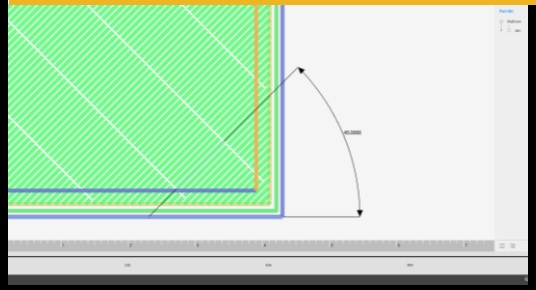
What Does Inspector Offer Now?

Materialise Inspector 2.0

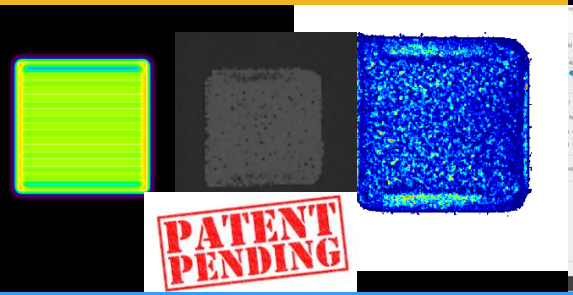
Tools Using Pre-Build Data

Intention: Find anomalies before printing

Slice Viewer



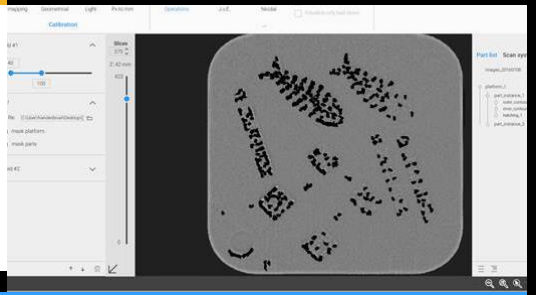
Energy Density Map



Tools Using Post-Build Data

Intention: Find anomalies after printing

Image Processing

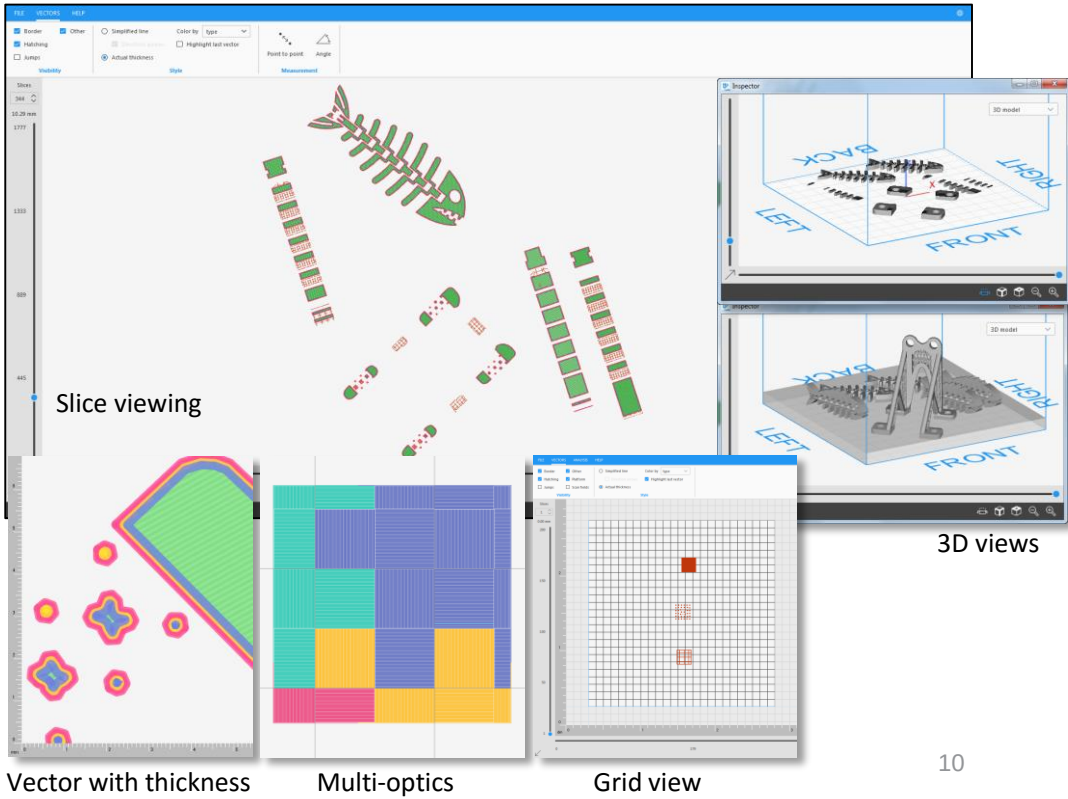


3D Model & Multi-View

Tools for Combined Analysis

Slice Viewer

- A variety of synchronized views
- A variety of color coding of vectors to enhance visualization and comprehension
- Multi-optics compatibility
- Platform display with grid view or scan field view
- File and vector info
- Measurement tools
- Large data handling architecture



Post-Build Image Analysis

1. Analyse big data in a time-efficient way

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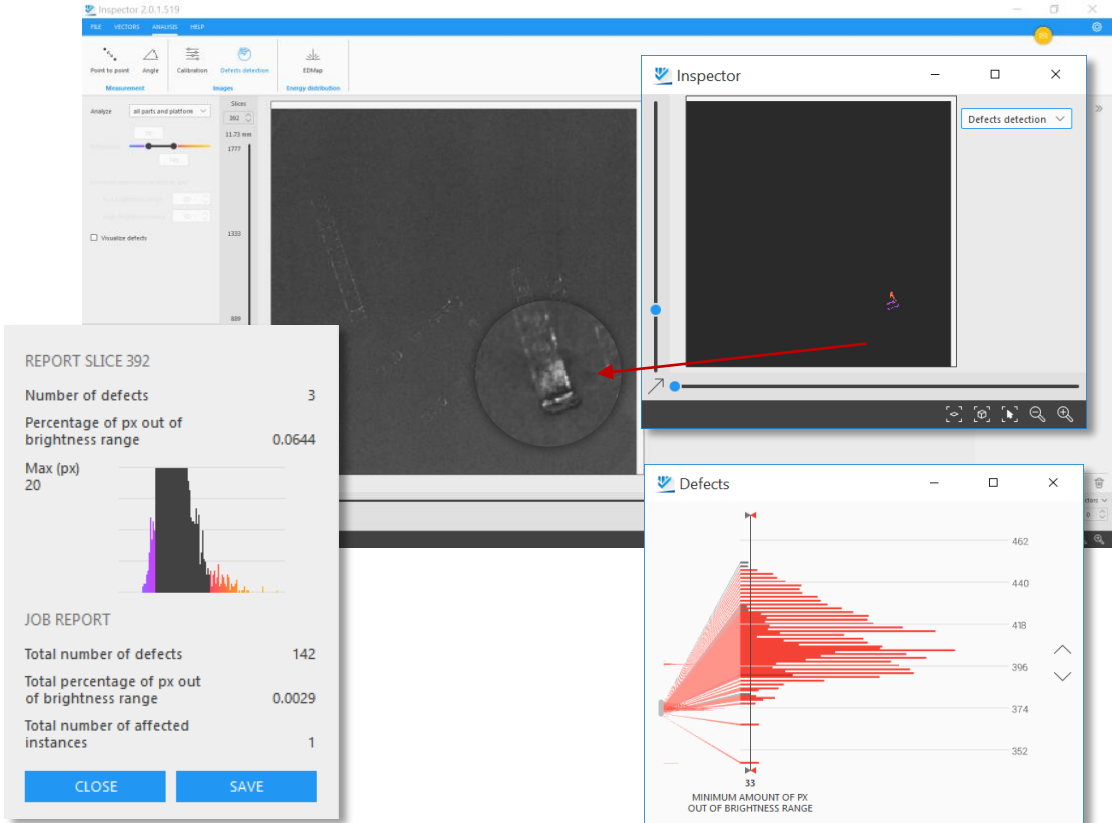
- Easily analyze big data
- Process 4000+ images swiftly
- Features:
  - Automatic image processing and navigation towards defects
  - Slice-by-slice report
  - Build report generation



Post-Build Image Analysis

2. Analyse every build in a consistent and repeatable way

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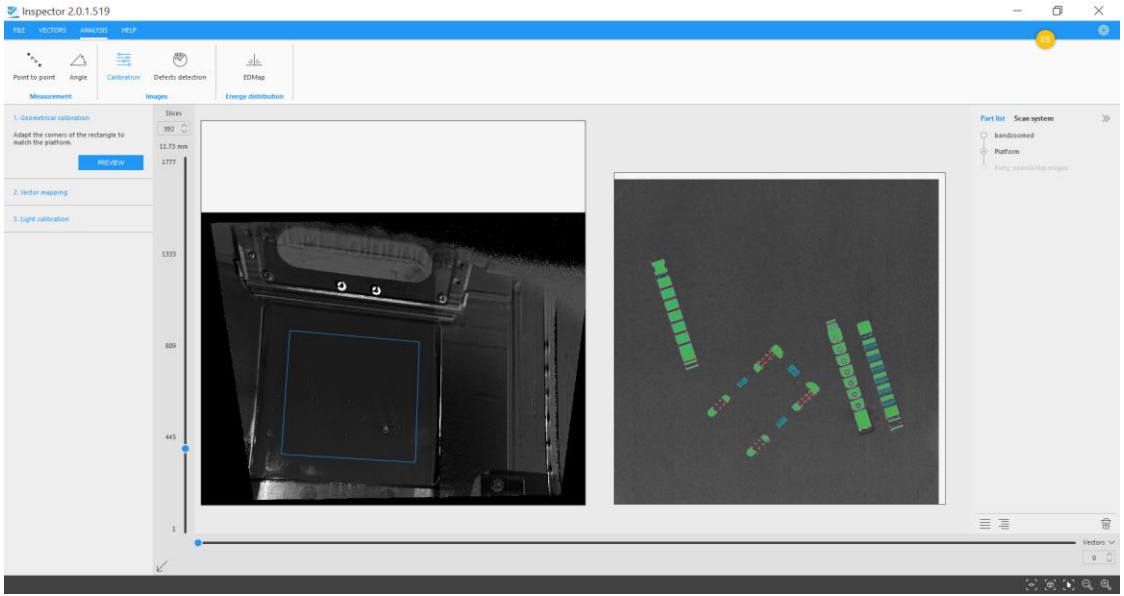
- Calibrate your machine once
- Features:
  - Calibration per machine (type)
    - Shape and size
    - Gray shades



Post-Build Image Analysis

2. Analyse every build in a consistent and repeatable way

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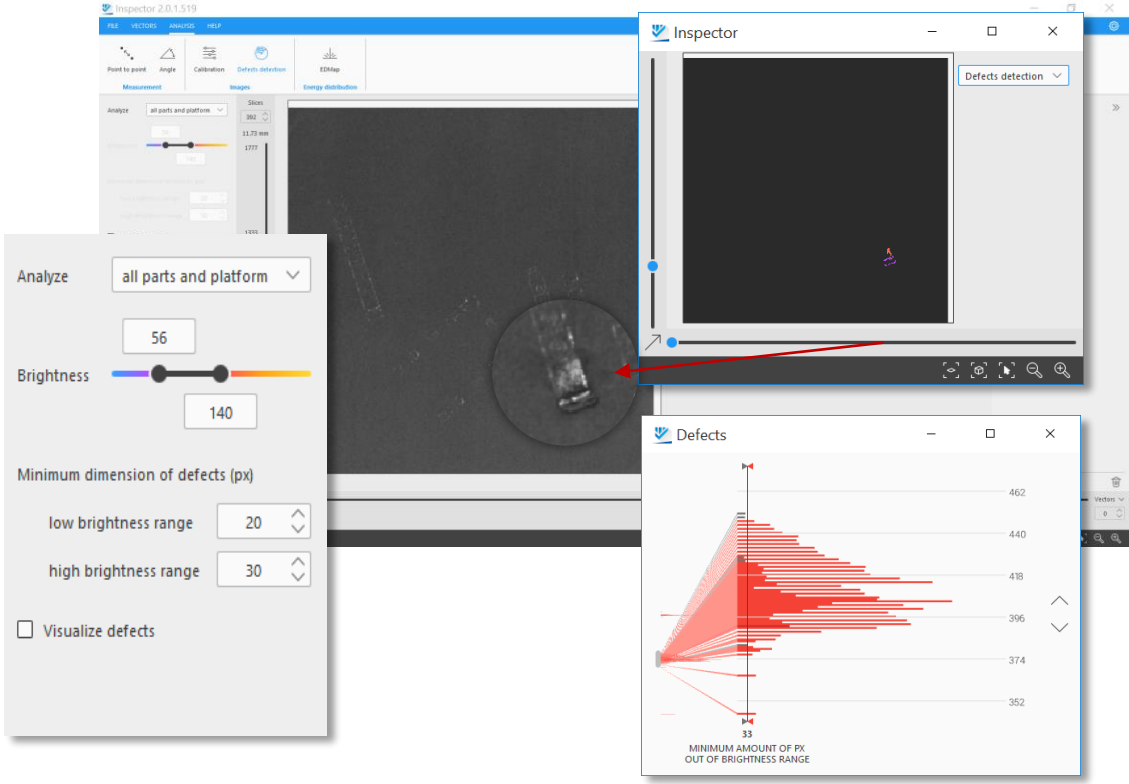
- Set threshold intervals according to defects
- Features:
  - Error definition as parameters
  - Re-usable settings



Post-Build Image Analysis

3. Gain process knowledge continuously

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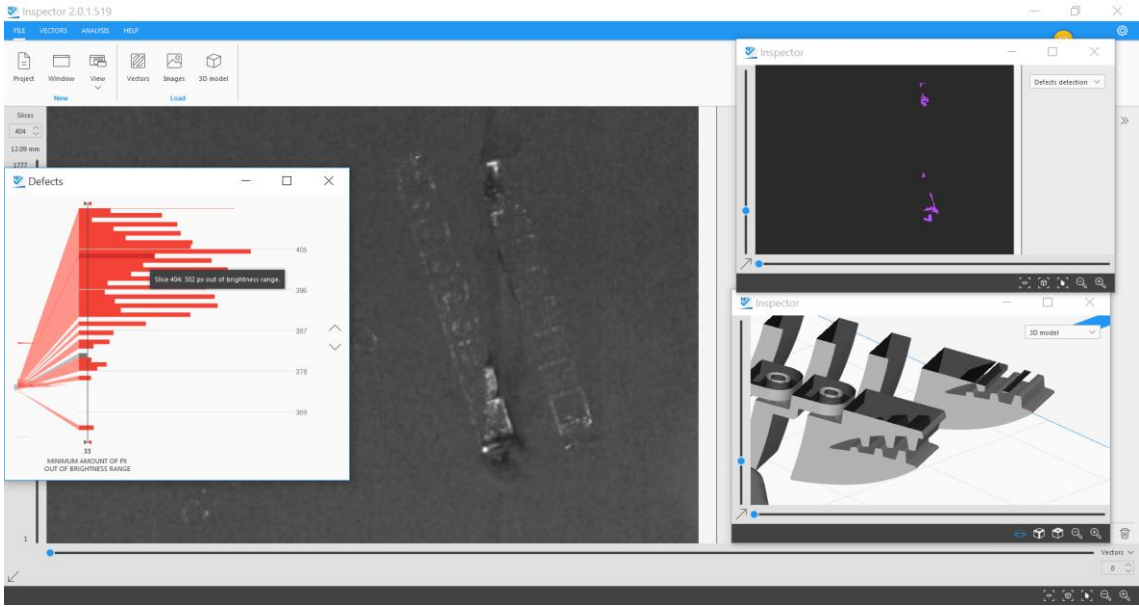
- Perform a root cause analysis using a combination of image and 3D data
- Observe error evolution patterns
- Avoid another failure in data preparation
- Features:
  - Defect Histogram
  - 3D View
  - Multi View



Pre-Build Image Analysis

Detect possible defects before build

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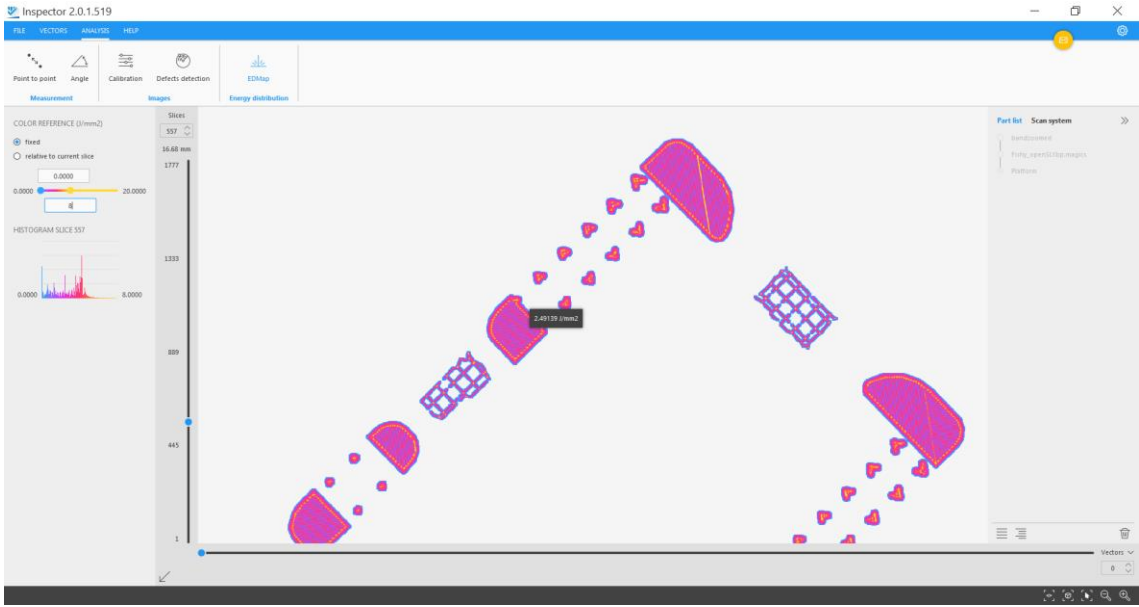
- More tangible way to understand the process
- Helps spotting critical areas
- Feature:
  - Energy Density Map (EDMap)



Pre-Build Image Analysis

Use cases

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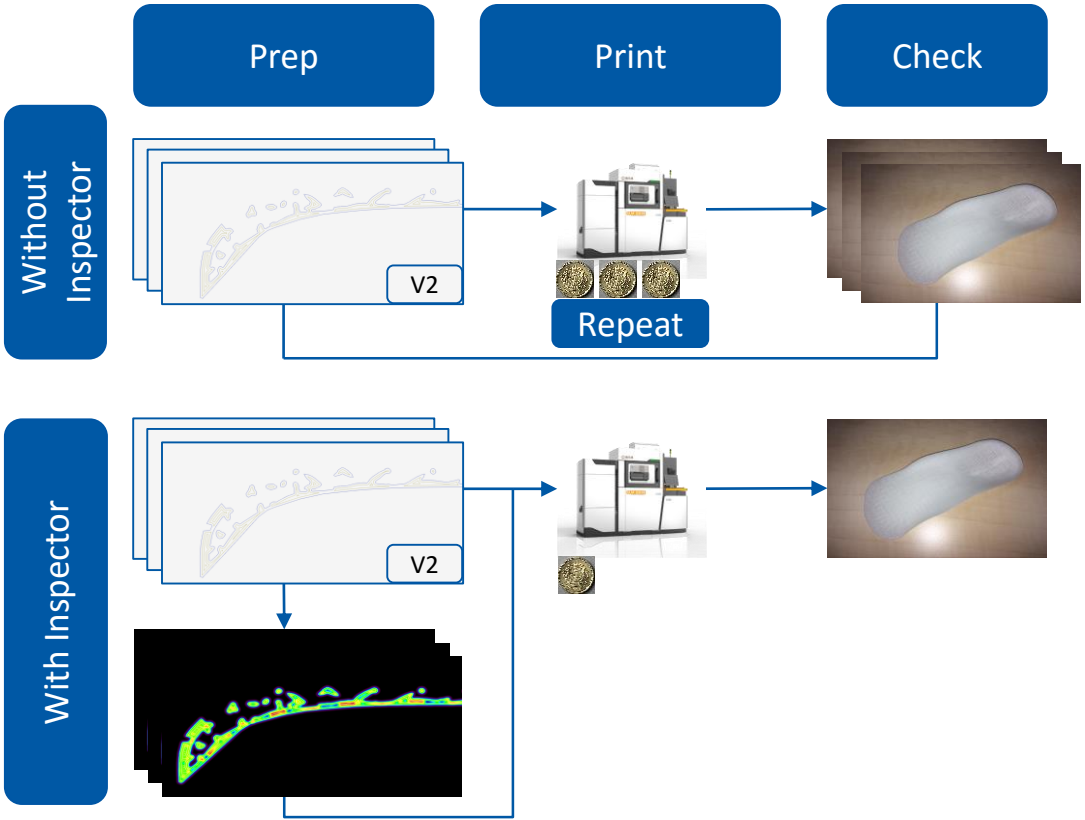
- Key benefits:
  - Increase R&D throughput
  - Iterate without printing
- For:
  - R&D/Process Engineers



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Thank you!