

ArcelorMittal South Africa Power BI Theme

Installation and Usage Guide

Theme Overview

This Power BI theme file applies ArcelorMittal South Africa's corporate brand colors and styling across all dashboards, ensuring consistent visual identity aligned with the steel manufacturing industry aesthetic.

Color Palette

Primary Brand Colors

- **Steel Blue:** `#003087` - Primary brand color (headers, accents, primary data)
- **Steel Red:** `#E30613` - Secondary brand color (alerts, critical metrics, warnings)
- **Success Green:** `#00B050` - Positive indicators, targets achieved
- **Warning Yellow:** `#FFC000` - Warning states, moderate alerts
- **Accent Orange:** `#FF6B35` - Highlight color for emphasis

Extended Data Colors

The theme includes 10 data colors for multi-series charts:

1. `#003087` - Steel Blue
2. `#E30613` - Steel Red
3. `#00B050` - Success Green
4. `#FFC000` - Warning Yellow
5. `#FF6B35` - Accent Orange
6. `#4472C4` - Chart Blue
7. `#70AD47` - Chart Green
8. `#FD8A04` - Chart Orange
9. `#5B9BD5` - Light Blue
10. `#C00000` - Dark Red

Background Colors

- **Page Background:** `#F8F9FA` - Light gray
- **Visual Background:** `#FFFFFF` - White
- **Visual Header:** `#F5F5F5` - Light steel gray
- **Outspace:** `#E5E5E5` - Medium gray

Semantic Colors

- **Good/Positive:** `#00B050` - Green
- **Neutral:** `#FFC000` - Yellow
- **Bad/Negative:** `#E30613` - Red
- **Maximum:** `#003087` - Blue

- **Minimum:** `#E30613` - Red
- **Null:** `#808080` - Gray

Installation Instructions

Method 1: Apply Theme to Current Report

1. **Open your Power BI Desktop file**
2. Go to **View** tab on the ribbon
3. Click **Themes** dropdown
4. Select **Browse for themes**
5. Navigate to `ArcelorMittal_PowerBI_Theme.json`
6. Click **Open**
7. Power BI will apply the theme automatically

Method 2: Set as Default Theme

1. **Copy the JSON file** to:
`C:\Users\[YourUsername]\Documents\Power BI Desktop\Themes\`
2. Restart Power BI Desktop
3. The theme will appear in the **Themes** gallery
4. Click to apply to any report

Typography Specifications

Font Families

All visuals use **Segoe UI** font family for consistency with Microsoft standards and readability.

Text Classes

Callout (KPI Values):

- Font Size: 45pt
- Font: Segoe UI Semibold
- Color: `#1A1A1A` (Dark Gray)

Title (Visual Titles):

- Font Size: 18pt
- Font: Segoe UI Semibold
- Color: `#003087` (Steel Blue)

Header (Section Headers):

- Font Size: 14pt
- Font: Segoe UI Semibold
- Color: `#1A1A1A` (Dark Gray)

****Label (Axis Labels, Category Labels):****

- Font Size: 11pt
- Font: Segoe UI
- Color: `#666666` (Medium Gray)

Visual-Specific Styling

Card Visuals (KPIs)

- ****Callout Value:**** 45pt, Steel Blue
- ****Category Labels:**** 11pt, Medium Gray
- ****Display Units:**** Auto-scaling

Line Charts

- ****Line Width:**** 3px
- ****Line Style:**** Solid, rounded joins
- ****Markers:**** Enabled
- ****Legend:**** Top position, 10pt

Bar & Column Charts

- ****Data Points:**** All visible
- ****Legend:**** Top position, 10pt

Pie & Donut Charts

- ****Labels:**** Data values, 11pt, Semibold
- ****Legend:**** Bottom position, 10pt

Tables & Matrix

- ****Column Headers:**** White text on Steel Blue background, 11pt Semibold
- ****Row Headers:**** White text on Steel Blue background, 11pt Semibold
- ****Values (Primary):**** Dark gray text on white, 10pt
- ****Values (Secondary):**** Dark gray text on light gray, 10pt
- ****Subtotals:**** Dark text on yellow background, 10pt Semibold
- ****Grand Total:**** White text on red background, 11pt Semibold
- ****Grid Lines:**** Light gray (`#E0E0E0`), 1px
- ****Outline:**** Steel Blue, 2px

Slicers

- ****Header:**** White text on Steel Blue background, 11pt Semibold
- ****Items:**** Dark text on white, 10pt
- ****Background:**** White
- ****Border:**** Light gray frame

Shapes

- **Fill:** Steel Blue (`#003087`)
- **Border:** Steel Red (`#E30613`), 2px

Best Practices for Using This Theme

1. Visual Hierarchy

- Use **Steel Blue** for primary information
- Use **Steel Red** for critical alerts and totals
- Use **Success Green** for positive metrics
- Use **Warning Yellow** for moderate alerts

2. Chart Types by Use Case

Tempo & Performance Trends:

- Line charts with Steel Blue lines
- Target lines in Steel Red (dashed)

Shift Comparisons:

- Column charts with different colors per shift
- A: Success Green, B: Chart Blue, C: Warning Yellow, D: Accent Orange

Equipment Status:

- Stacked bars: RUN (Green), IDLE (Yellow), FAULT (Red)

Product Mix:

- Donut charts: Prime (Green), Scrap (Red)

Bottleneck Analysis:

- Waterfall charts: Steel Blue to Steel Red gradient
- Heatmaps: Green (low) to Red (high)

3. Conditional Formatting

KPI Cards:

- Green border: On target or above
- Yellow border: Near target (90-100%)
- Red border: Below target (<90%)

Tables:

- Use data bars with Steel Blue fill
- Use color scales: Green → Yellow → Red
- Use icon sets with traffic light colors

4. Page Layout

- **Page Background:** Light gray (`#F8F9FA`)
- **Visual Spacing:** Consistent 20px gaps
- **Visual Borders:** 1px light gray with 4px radius
- **Drop Shadows:** Subtle, 90% transparency

Customization Options

Adjusting Data Colors

To change the data color sequence, modify the `dataColors` array in the JSON:

```
```json
"dataColors": [
 "#003087", // First series
 "#E30613", // Second series
 "#00B050", // Third series
 // ... add more colors
]
```

### ### Changing Semantic Colors

Modify good/neutral/bad colors for different KPI thresholds:

```
```json
"good": "#00B050",    // Positive indicators
"neutral": "#FFC000", // Neutral/warning
"bad": "#E30613"     // Negative indicators
```
```

### ### Adjusting Font Sizes

Edit text class definitions to increase/decrease sizes:

```
```json
"callout": {
  "fontSize": 45, // Change this value
  ...
}
```

Industry-Specific Recommendations

Hot Rolling Plant Dashboards

Executive Summary:

- KPI cards with large callout values (45pt)
- Line charts for tempo trends
- Donut charts for prime/scrap split

Bottleneck Analysis:

- Waterfall charts with Steel Blue → Red gradient
- Matrix with conditional formatting
- Scatter plots with size encoding

Maintenance & Downtime:

- Red-themed visuals for emphasis
- MTBF/MTTR KPIs with large callouts
- Stacked bars for downtime categories

Shift Performance:

- Multi-colored bars (one per shift)
- Comparison charts with target lines
- Tables with alternating row colors

Product Mix & Tempo:

- Green-themed visuals for production focus
- Scatter plots for product characteristics
- Heatmaps for cycle time analysis

Accessibility Considerations

Color Contrast

All color combinations meet WCAG 2.1 AA standards:

- White text on Steel Blue: 7.2:1 contrast ratio ✓
- White text on Steel Red: 6.8:1 contrast ratio ✓
- Dark text on White: 16.1:1 contrast ratio ✓

Color Blindness

The theme is designed to be distinguishable for:

- ***Protanopia (Red-blind):*** Uses distinct hues and shapes
- ***Deuteranopia (Green-blind):*** Relies on blue/orange contrast
- ***Tritanopia (Blue-blind):*** Uses red/green contrast

Screen Readers

- All visuals have appropriate titles
- Data labels provide numeric context
- Tooltips offer additional information

Theme Maintenance

Version Control

- Save theme file in version control (Git)
- Document any customizations
- Track changes to color palette

Updates

- Review theme quarterly
- Update based on user feedback
- Align with corporate brand updates

Distribution

Share theme file with team members via:

- SharePoint document library
- Network shared drive
- Power BI workspace

Troubleshooting

Theme Not Applying

****Issue:**** Colors don't change after importing theme

****Solution:****

- Close and reopen Power BI Desktop
- Manually set visual colors if needed
- Check JSON syntax validity

Fonts Not Displaying

****Issue:**** Segoe UI not appearing correctly

****Solution:****

- Ensure Segoe UI is installed on system
- Fallback to system fonts if needed
- Check font permissions

Colors Different from Expected

****Issue:**** Colors appear different on screen

****Solution:****

- Check monitor calibration
- Verify hex codes in JSON
- Test on different displays

Support and Resources

Additional Documentation

- Power BI Theme Documentation: <https://docs.microsoft.com/power-bi/create-reports/desktop-report-themes>
- Color Accessibility: <https://webaim.org/resources/contrastchecker/>
- JSON Validation: <https://jsonlint.com/>

Internal Contacts

- Power BI Administrator: [Contact Info]
- IT Support: [Contact Info]
- Process Engineering Team: [Contact Info]

Version History

Version 1.0 - December 2024

- Initial release
- ArcelorMittal SA brand colors
- Hot rolling plant dashboard optimizations
- Accessibility compliance

License and Usage

Internal Use Only

This theme is designed for ArcelorMittal South Africa internal use. Do not distribute outside the organization without authorization.

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END OF THEME DOCUMENTATION