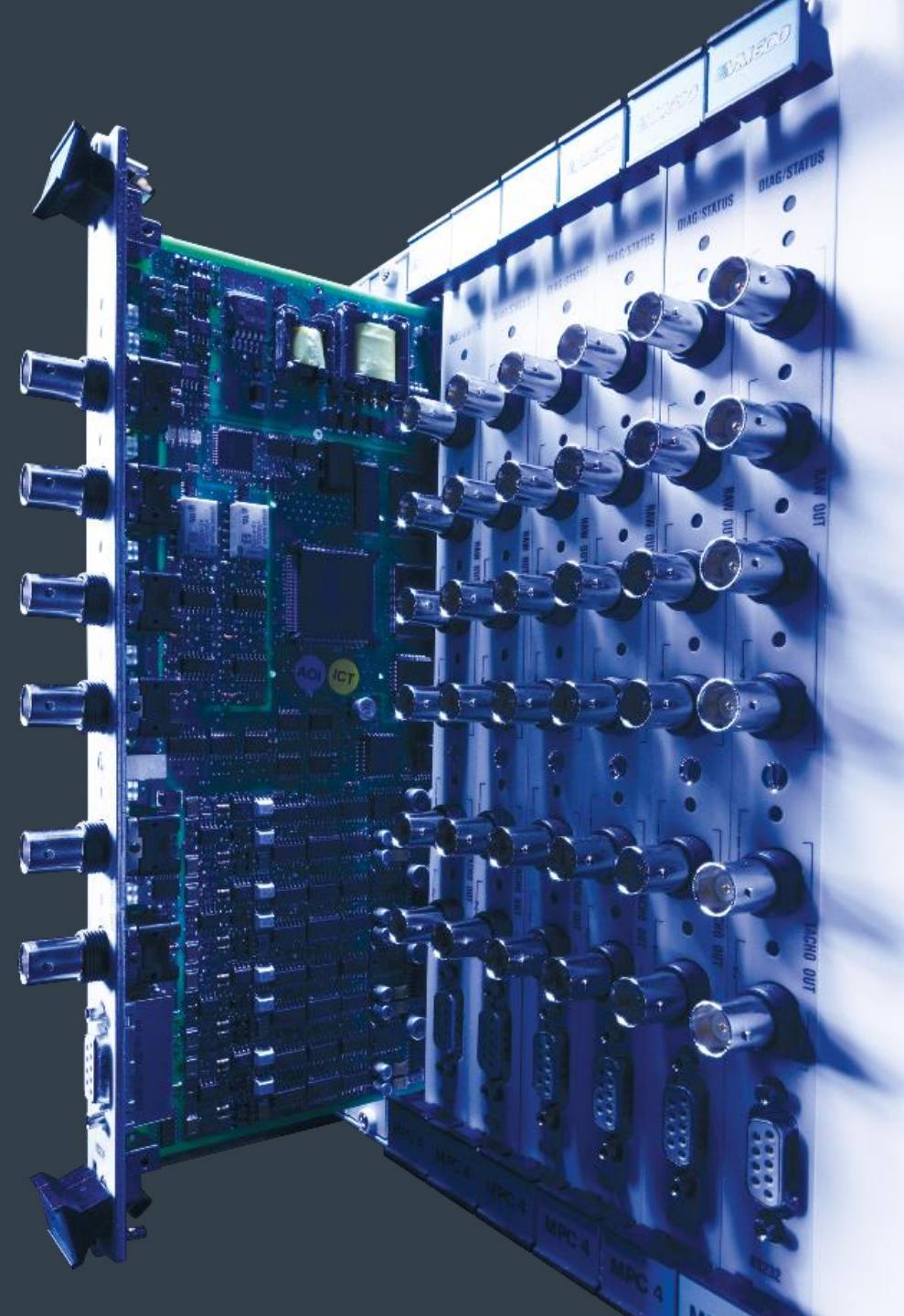


vibro-meter®

VM600MK2

Welcome To WEBINAR I



Commercial Introduction

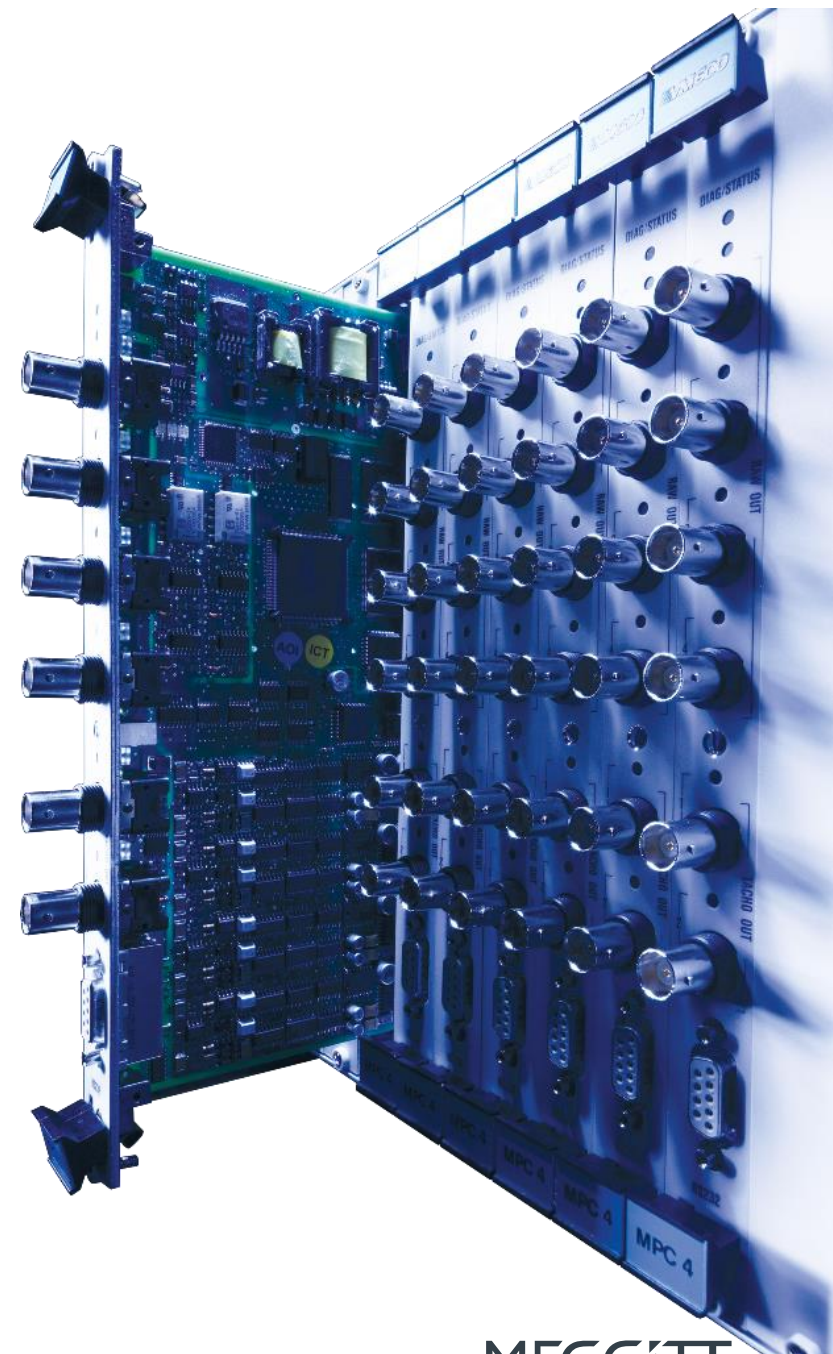
VM600Mk2

MACHINERY PROTECTION SYSTEM

Host: L. J. Swaminathan

Title: Regional Director South East Asia, India & Middle East

Date: 18 Nov 2020



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VM600

SUCCESS STORY

Go to www.menti.com and use the code 80 97 82 4

How many VM600 systems have been installed worldwide since its launch?

0	0	0	0
13'000	8'000	5'000	3'000

Press **ENTER** to show correct



MEGGITT

Table of contents

VM600^{Mk2} Commercial Introduction

1. VM600 success story
2. Why VM600^{Mk2}
3. VM600^{Mk2}
4. Market context & opportunity
5. Launch road map
6. Q&A

VM600 success story

Introduction

> 8'000 Systems Protecting & Monitoring Plants 24x7...Worldwide



Introduced To Market In **2001**



Over **8'000** VM600 Racks Produced



40'000 MPC4 Machinery Protection Modules

5'500 CMC16/XMV16/XMC16 Condition Monitoring Modules

VM600 Evolution through time

VM600^{Mk1} Launch

Basic MPS:
- MPC4,
- CPUM,
- RLC16

CMS S/W
CMC16

AMC8

IRC4
CPUR
XMV16 & XMC16
VibroSight
CMS Software

CPUR2

MPC4 SIL1 version

SIL2 certification
Per IEC61508 (PiU)

VM600^{Mk2}



6U



1U



VM600 FORMATS

VM600MK2

Next Generation Rack-based System For Advanced
Machinery Protection And Condition Monitoring Specially
Designed For Critical Rotating Machinery.

Why VM600^{Mk2} ?

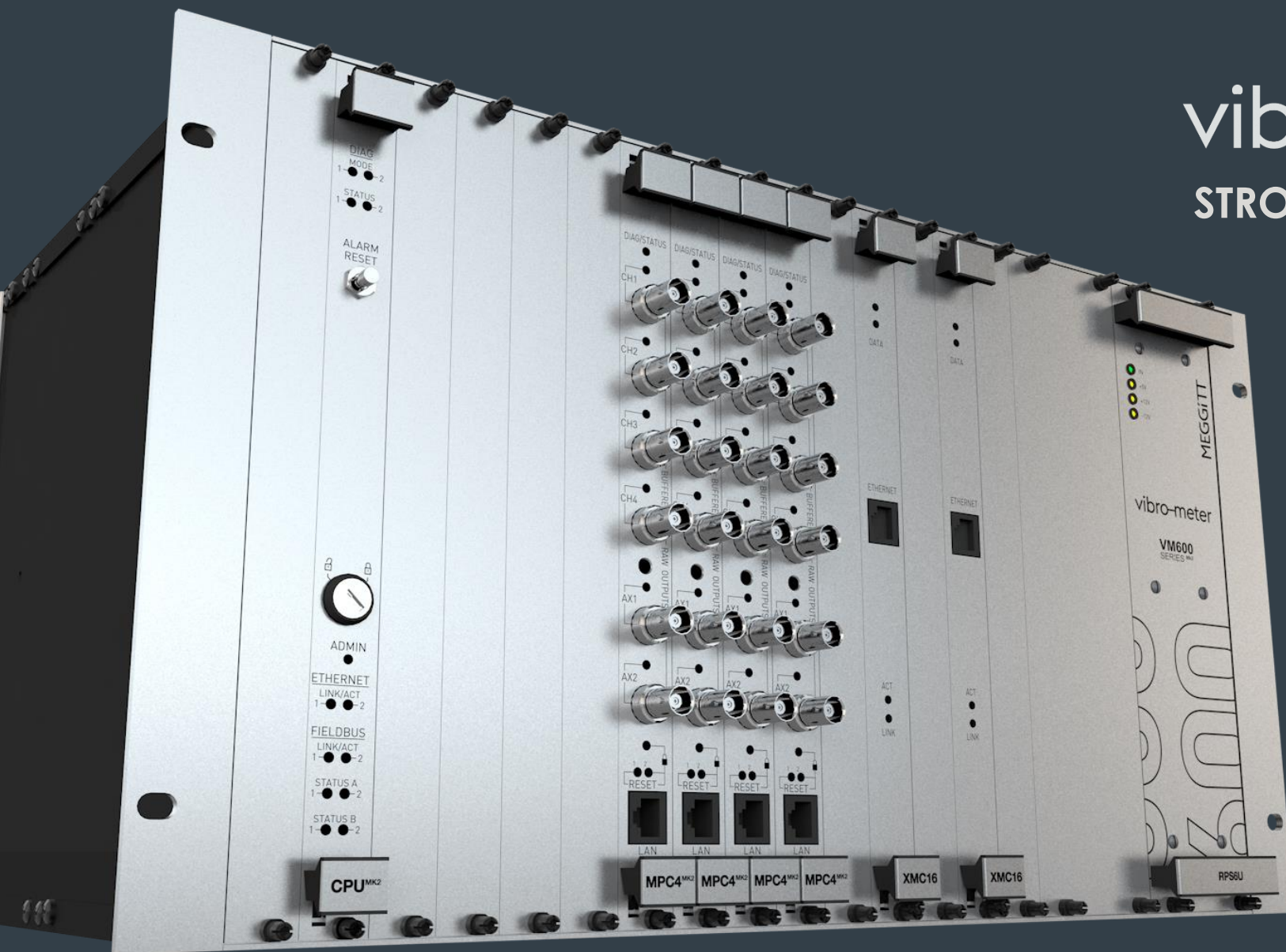
Technical evolution



- ✓ Component **Obsolescence** Issues
- ✓ Benefit From **State Of The Art HW And SW Technology**
- ✓ **Improve** Technical Characteristics
- ✓ **Address New Requirements And Markets Needs**

vibro-meter

STRONG – LEGACY – TIMELESS



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VM600 Design Concept

Centralized System

Designed To Centrally Process A Wide Range Of Dynamic Inputs Coming From A Variety Of Critical Assets

All Measurements In One Card

Enables Complex Systems To Be Built With A Minimum Number Of Cards Through The Well Thought Modular Structure And Smart Function Combination.

Flexible Network Architecture

Easy Integration With VibroSmart Distributed Monitoring System For Optimal And Flexible Network Architecture In A Condition Monitoring System Platform.

VM600^{Mk2} DESIGN CONCEPT ENHANCEMENT

MPC4^{Mk2} With Condition Monitoring Capabilities

- Covers most of energy industry CMS needs
- Completely segregated Per API 670 5th Edition
- Comprehensive view on machinery behavior: MPS data can be logged and displayed on the Condition monitoring system

Easy And Fast Configuration

NEW VibroSight Protect

- User-friendly interface visually guides measurement channel configuration based on the sensor family and the type of processing required.
- MPS and CMS distinct configuration software applications ensure complete segregation



Key features: VM600^{Mk2} hardware

Machinery Protection System

New hardware modules

MPC4^{Mk2} + IOC4^{Mk2}, RLC16^{Mk2}, CPU^{Mk2}

- ✓ Same functionalities but with **improved measurement and processing performance**
 - Not seamless compatibility, manual configuration adaptation is required
- ✓ CPU^{Mk2} for fieldbus communication
- ✓ Full **API670 compliance**

AMC8 Coming Soon

**** Unchanged: XMV16 and XMC16 cards For CMS**

Enhanced features

- ✓ **Ethernet port** for configuration & data visualization
- ✓ **Enhanced security**: card lock, F/W recovery mode etc.
- ✓ Several enhanced **signal processing capabilities**:
 - 24bits ADC resolution
 - 20khz bandwidth
 - Up to 5 processed output's per channel

Added capabilities

- ✓ **Integrated CMS** in MPC4^{Mk2}, in-situ upgrade
- ✓ **Cybersecurity** certification per IEC62443
- ✓ **SIL 2** by design per IEC61508 (H1-2022)

Key features: VM600^{Mk2} software

Machinery protection system



New machinery protection configuration software

Ease to use and **intuitive user interface**

Fast configuration...>2x Faster Than MPS1 Software

Checks overall rack configuration consistency
(as opposed to one-by-one card configuration)

VibroSight Protect

File Edit Tools Help

Layout Configure Dashboard

VM600 - 6U > MPC4 Slot 03

System properties

Type

C40S

Tag name

VM600 - 6U

Description

System I/O

Total dynamic channels

1

Total DC channels

0

Total tachos

0

Total relays

0

Total analog outputs

1

Rack bus usage

0%

Power consumption calculator

You can verify here which power supply configurations are adequate to the rack power

Consistency checks

Rotate Bus view

Current view: Front

System

VM600 - 6U

MPC4 Slot 04

RLC16 Slot 02

MPC4 Slot 03

Channel 1

Analog output 1

MPC4 Slot 05

MPC4 Slot 06

History

Undo Redo

Card moved from Slot 09 to Slot 11

One MPC4 added

One MPC4 added

One MPC4 added

Card moved from Slot 02 to Slot 09

One RLC16 added

Adding a Analog output 1

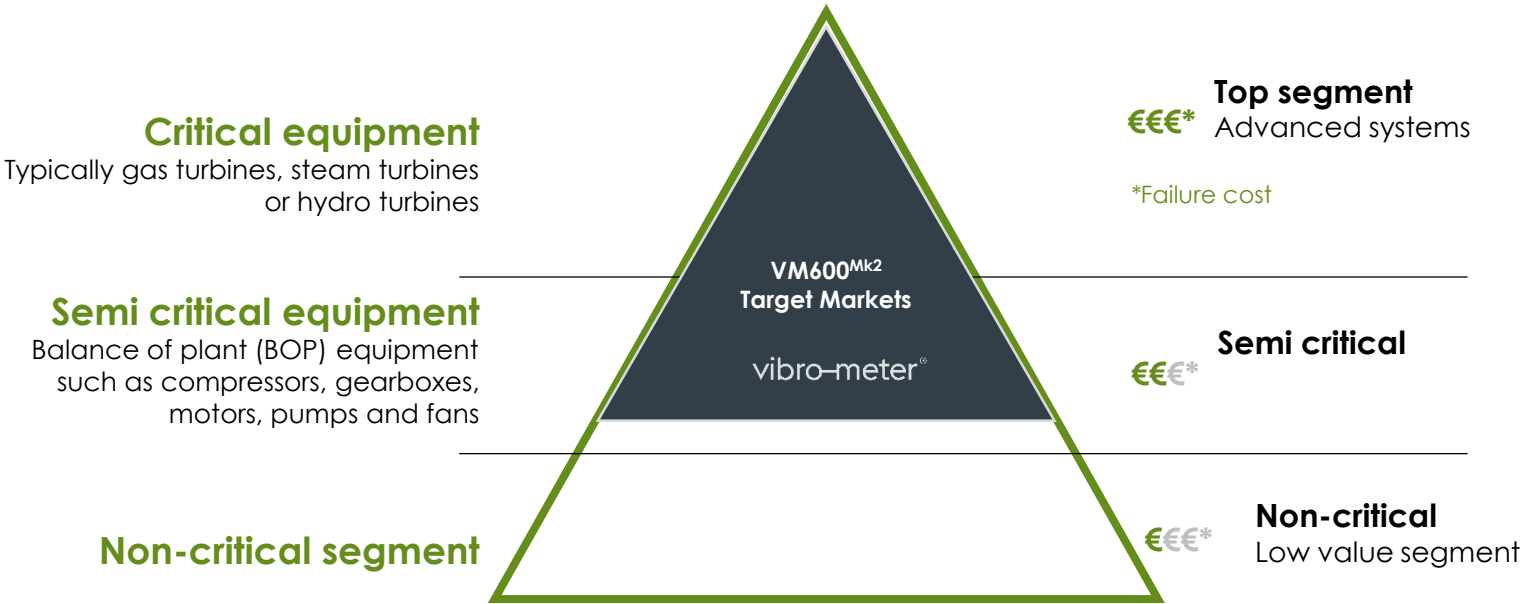
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VM600MK2

MARKET CONTEXT & OPPORTUNITY

Market segments



Market segments

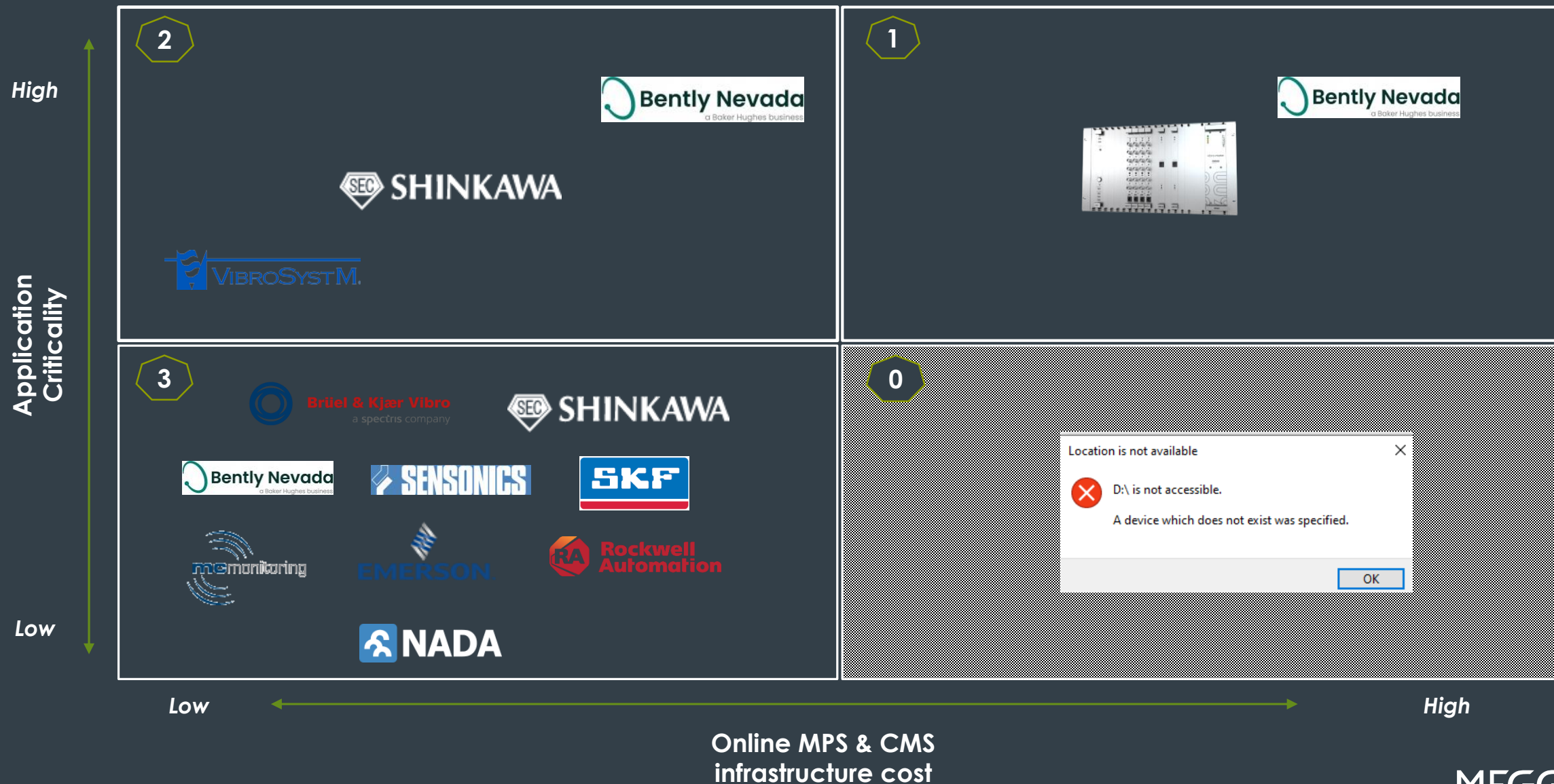
Critical equipment market expansion

VM600 Competitiveness	Mk1	Mk2
• Machinery Protection For Critical & Semi Critical Assets	+++	+++
• Machinery Protection With Condition Monitoring	+++	+++
• Condition Monitoring	+++	+++



- ✓ By enabling **life cycle extension** of the existing platform*
- ✓ By focusing on **core enhancements**: integrated CMS, improved processing performance
- ✓ By being compliant to “**evolving industry standards**”: cybersecurity, API 670 compliance,
- ✓ By offering a **competitive price strategy** especially for CMS integrated solutions

Competitive Landscape



VM600^{Mk2} Positioning

Advanced machinery protection and condition monitoring designed for critical rotating machinery

What we offer?

The **most reliable condition and monitoring system** for critical machinery assets.

Market category

Critical rotating machinery

Target segment

Power Generation: gas & steam, coal, hydro and nuclear



Key benefit

- Longest Serving, Proven & Reliable MPS & CMS Platform
- New simplified and intuitive interface
- Total lowest life cycle cost Per MW
- Swiss quality

Key differentiators

- 100% API670 compliance
- SIL2 by design
- Cybersecurity compliance Per IEC62443
- Integrated high-end CMS

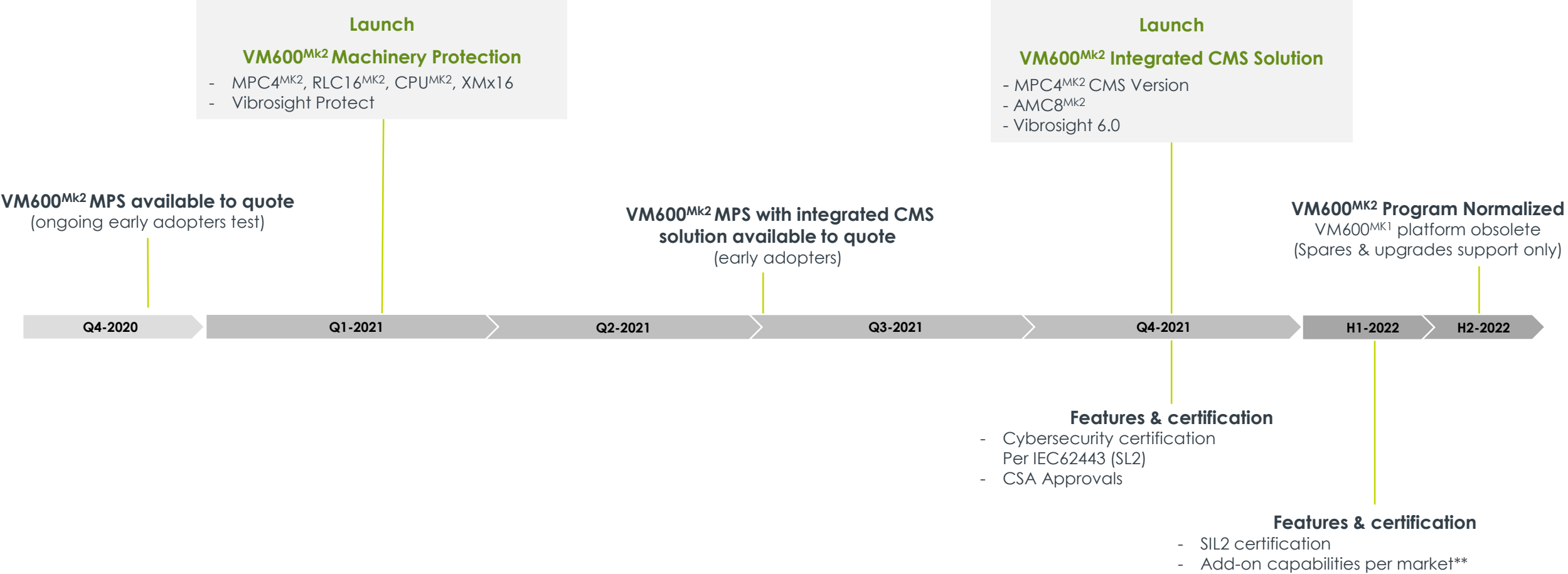
Competitive alternatives

- Bently-3500 & Orbit 60
- Emerson 6500OTG
- Shinkawa VM7
- B&K VC8000, SKF IMX-M

VM600MK2

LAUNCH ROADMAP

VM600^{Mk2} launch roadmap



NEXT STEPS



Tool Kit

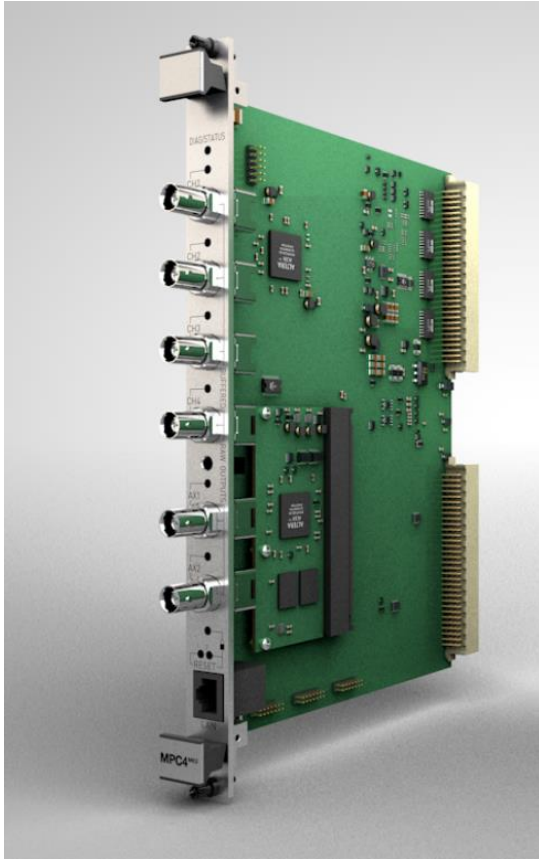
Want to learn more?

- ✓ Today's presentation
- ✓ Today's webinar recording
- ✓ Datasheets
 - MPC4^{Mk2} + IOC4^{Mk2}
 - RLC16^{Mk2}
 - CPU^{Mk2}
- ✓ Link for VM600^{Mk2} Landing Page (WIP)



Save the date

WEBINAR II - Technical introduction on VM600^{Mk2}



🕒 February 2021

Webinar II

VM600Mk2 technical introduction

- ✓ **Theme:** Mk1 vs Mk2, configuration with VibroSight Protect live demo etc
- ✓ **Tool Kit:** technical presentation, demo recording, manual.

Q&A

How would you rate today's session?

Go to www.menti.com and use the code 80 97 82 4