

# **WEBINAR TERRESTRE**

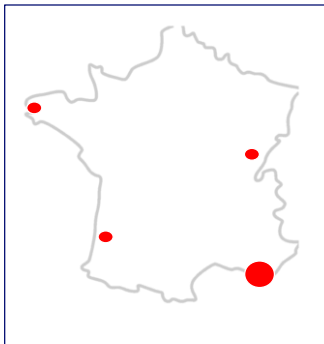
## **CNIM SYSTÈMES INDUSTRIELS, KEY PARTNER FOR ENGINEERING UNITS**

SUPPORT & PROTECT FORCES IN OPERATIONS



ORCES?

# ABOUT CNIM SYSTÈMES INDUSTRIELS



- French OEM and industrial engineering contractor on strategic markets (defense, nuclear, space and semiconductors)
- Head office and industrial tool in La Seyne Sur Mer (83)
- Serving governments, local authorities and major private or public companies
- 100% subsidiary of REEL Group since 2022

KEY FIGURES 2022

## CNIM Systèmes Industriels

74

Millions €  
of turnover

400

Employees

## REEL Group

520

Millions €  
of turnover

2 500

Employees



# CNIM SYSTÈMES INDUSTRIELS, DEDICATED TO MILITARY ENGINEERING SINCE 1970

Crossing systems



Special-purpose vehicles



The background of the slide features a sepia-toned photograph of two soldiers in silhouette, standing on a grassy ridge and looking out over a vast, cloudy landscape. The soldiers are equipped with tactical gear and rifles. The overall mood is somber and contemplative. A solid blue triangle is positioned in the top-left corner of the slide.

# **A GLOBAL OFFER TO ADDRESS CHALLENGES AND TRANSFORMATION OF FORCES**

# THE PFM MOTORIZED FLOATING BRIDGE





# THE CHALLENGES OF CROSSING

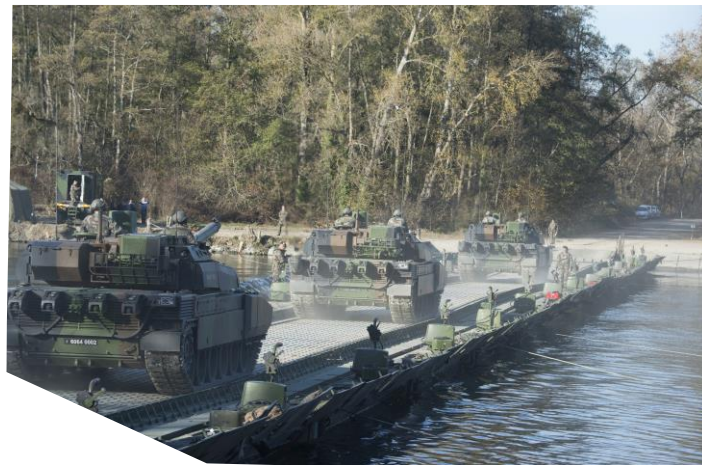
Crossing is back in the forefront



Tense geopolitical context



Many watercourses and other hydrological features challenges to overcome



**The speed of military tactical operations must be fast** : a few lost moments can leave soldiers vulnerable to enemy fire, and thus complicate troop deployment.

# THE PFM, A 3-IN-1 BRIDGING SYSTEM

**BOTH A BRIDGE, A FERRY AND A SHORT GAP CROSSING CAPABILITY, THE MOTORIZED FLOATING BRIDGE (PFM) IS A SPECIFIC EQUIPMENT THAT ENABLES MILITARY OR CIVILIAN VEHICLES TO CROSS WIDE WET GAPS.**



Quick implementation, safe crossing and a **full adaptation to the bank without preparation**



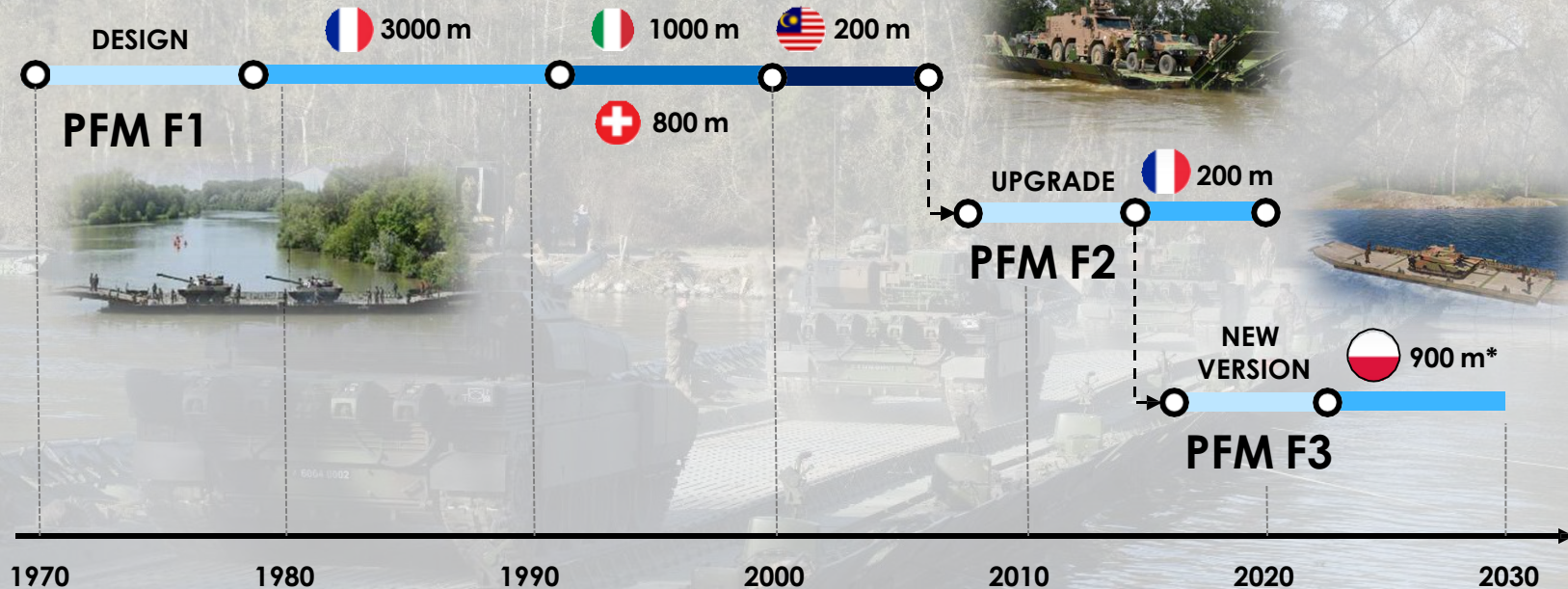
Modular Ferrying Capacity up to a maximum class of **MLC 90T / 100W**



Alone and launched by the semi-trailer, the access ramp can be used to cross **dry gaps up to 10 m.**



# PFM : A CONTINUOUSLY IMPROVING FLOATING BRIDGE



\*Included in the Framework Agreement signed June 2022



# PFM F3 : UPGRADED PFM TO MEET NATO NATIONS' NEEDS

## CORE BENEFITS OF PFM F1/F2

✓ Fast & easy construction

✓ Excellent maneuverability on the water

✓ Lowest Total Cost of Ownership

✓ No Boats

## UPGRADES OF PFM F3

✓ MLC 90 T / 100 W

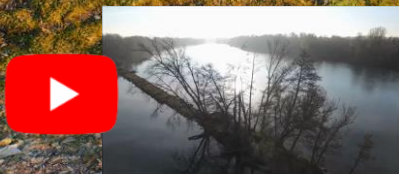
✓ Compatible with 8x8 Trucks

✓ Floating Ramp

✓ Diesel Engine

✓ Corrosion Resistant Aluminum

✓ Remote control





# 2015-2020 : UPGRADED PFM TO MEET NEW OPERATIONAL CHALLENGES

Modernizing the PFM

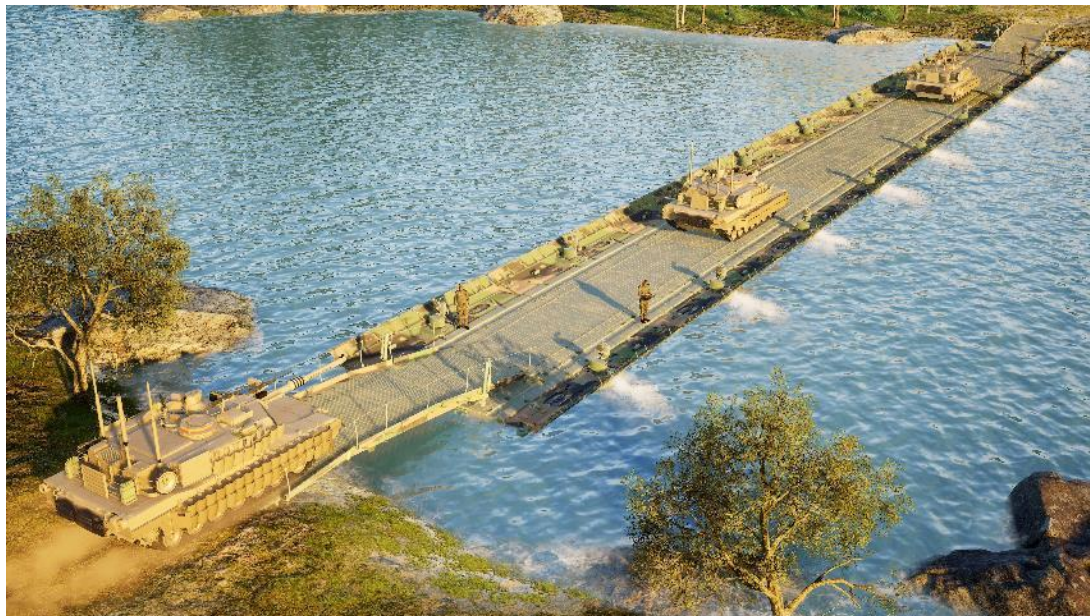


Latest new features (French Army – 2020)  
/ Reduced logistic footprint: **integrated short ramps**  
/ Personal reduction: piloting modules with **single remote control**



## 2022-2025 : PFM NEW GENERATION

The latest version of the Motorized Floating Bridge (LG configuration), to be delivered to the Polish forces



**State-of-the-art tactical and technical capabilities**  
**Safe & fast crossing for logistic vehicles and battle tanks of all classes**  
**including the heaviest version of the Abrams tank (SEPv3)**



# CHOOSING THE BEST OPERATIONAL WET GAP CROSSING SOLUTION





# THE PFM F3 PRODUCT RANGE

The PFM F3 has modular design, configurable to address a wide variety of customer, it consists of 4 sub-systems that have two standard configurations\*: LG or XP

LG

## CARRIERS



6x6 PRIME-MOVER



SEMI-TRAILER

## INTERIOR SECTIONS



LONG SECTION | 11M

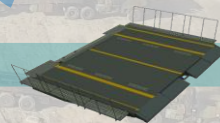


SHORT SECTION | 6,7M

## RAMPS



TACTICAL RAMP  
13,6M



FLOATING RAMP  
6,7M

XP



8x8 DROPS-PLS TRUCK



FLATRACK PALLET

*\*Other configurations are possible on demand*

# PRIME MOVER WITH SEMI-TRAILER FOR ROUGH TERRAIN

## 6x6 PRIME MOVER

- / High **Land Mobility**
- / Enhanced **Bank Launching & Retrieving**
- / Extra armored **cabin Space** (up to 4 crew)

## SEMI-TRAILER

- / Proven launching System

## LONG INTERIOR SECTION

- / MLC 90T
- / 11 meter long
- / Optimized Cost & Footprint

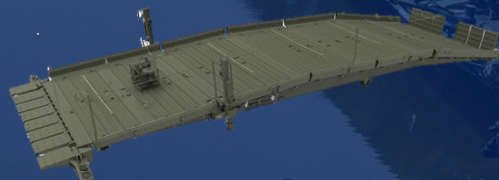


PFM LG CONFIGURATION

# MULTI PURPOSE TACTICAL RAMP

- PFM LG's basic configuration includes tactical ramps, but the ramp section is possible on demand

- / Access to up to **3m high banks**
- / **No bank preparation** needed
- / Used for **interoperation** with other bridges
- / **Dry gap Crossing** capability
- / **Easy to transport**





# ADAPTED TO 8X8 LOGISTICAL TRUCK WITH STANDARD DROPS PLS

## 8x8 LOGISTICAL TRUCK

- / **Military Standard** truck with hook-lift
- / Both **Compact & Mobile**
- / High **Maneuverability**
- / **Less qualified personel**

XP

## FLATRACK PALLET

- / Same launching system as PFM LG
- / Easy to transport & store



## SHORT INTERIOR SECTION

- / MLC 90T
- / 6.7 meter
- / Optimized for plane transportation on a A400M or equivalent





PFM XP CONFIGURATION

# FLOATING RAMP

PFM XP's basic configuration includes ramp sections, but other ramps are possible on demand

- / Tactical and low-clearance vehicle crossing
- / **High speed entrance** on ramp section
- / **Enhanced floatability** in ferry navigation
- / **Easy to transport**



# PFM, KEY PERFORMANCES



**100m bridge** in less than **30minutes**



MLC : **90T/100W**



**200 vehicles/hour**



**2,5m/s** current speed



**100m bridge = 18 engineering staff + 11 drivers**



# THE MOTORIZED FLOATING BRIDGE IS A GAME CHANGER FOR LAND FORCES



# THE ROCUS

## ROUTE CLEARANCE UNMANNED SYSTEM



INSÉRER UN TAMPON COMBAT PROVEN





# LAND ROBOTICS

## Maintaining, supporting and enhancing combatant capabilities

Robotic systems increasingly play an essential role in ground operations. They provide **crucial support for manoeuvres**, by:

- / protecting soldiers
- / performing repetitive, tiresome and/or hazardous tasks

They have **multiple applications**, in even the most extreme conditions:

 Mine clearance  
Anti-IED measures

 Equipment transportation



# ROCUS, ROUTE CLEARANCE UNMANNED SYSTEM

Keeping convoys moving and enhancing mission safety

Route clearance operations must overcome two challenges:

- 🕒 time pressure,
- 🕒 the potential threat of hostile fire.

The rugged, autonomous and easy-to-use ROCUS UGV enhances **military capabilities** and **reduces soldiers' threat exposure**.



# ROCUS, OPTIMAL OPERATIONAL PERFORMANCE

## Rugged, simple-to-operate equipment

### Ground blade for obstacle clearance operations

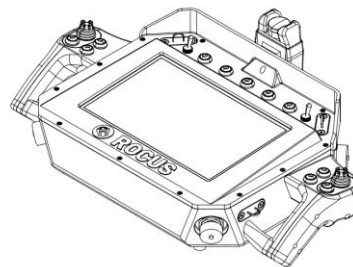
- Able to strip ground to a depth of 10 cm
- Up to 2 tonnes of blade thrust

### Rake/hoe tool to dig into and break up ground

- Up to 330mm diameter
- 100kg gripping force

### Grapple and winch

- Up to 2 tonnes



## Controlled by an unified command system

# A COMBAT PROVEN SYSTEM

## ThEMIS UGV



Ultra-mobile



Equipped with state-of-the-art sensors



Modular



Designed for extended operation

The **ThEMIS UGV** has been fielded successfully by numerous armed forces



## ROCUS

7 ROCUS deployed in Ukraine since June 2023





# ROCUS, ADVANTAGES

## Enhancing military capabilities in the field

ROCUS gives users **OPERATIONAL ADVANTAGE**:

- **Tracked vehicle** > High mobility and low ground pressure
- **Reduced logistical footprint** > Single remote operator
- **Towable across any terrain** > Easy projection to the mission theatre
- **Hybrid vehicle** > Uses the same fuel as the convoy vehicles
- **Easy through-life servicing** > Off-the-shelf civilian spares
- **Suitable for air transport**
- **Configurability / Modularity** > from mule to ROCUS et from ROCUS to mule

Designed to operate in difficult terrain, **ROCUS delivers a winning combination of extended range, rugged construction and ease of use.**



# ROCUS, KEY PERFORMANCES



Speed : **20km/h**



Endurance : **10h**



Reach of the manipulator arm: **4m**

Lifting capacity : **120kg**



Arm rotation : **335°**



Easy to use :

→ **BIRD VIEW mode**

→ **User-friendly interface**



# 2024 ROCUS NEW FEATURES



## An unified command system

### All ROCUS information at your fingertips:

- **Software integration** > Ability to integrate all types of software
- **Video streams** > View all live video streams in high quality
- **One-handed robot control** > lightweight nunchuk
- **Displays all robot data** > Batteries, Speed, Distance, etc.



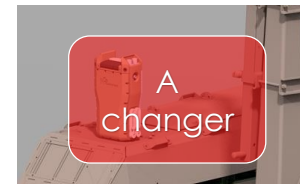
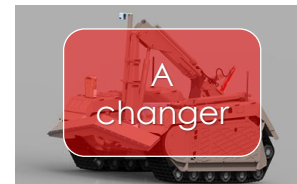


# 2024 ROCUS NEW FEATURES

## A constantly evolving UGV on customer request

### Jammers :

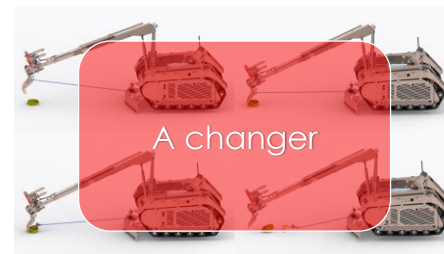
→ **Protective radius around the UGV** > ensure maximum safety during operations



### Winch and grapple kit:

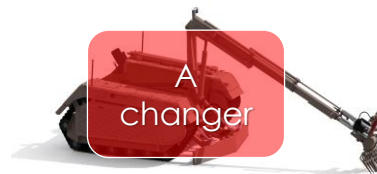
→ **Ensure that any explosive is located underneath a threat** > anti-tank mines, 20L jerry cans or 155m shells

→ **Freeing a stuck vehicle** > 2-tonne winching capacity allows freeing itself or another ROCUS from complex terrain



### Disruptor :

→ **Threats neutralization** > Pipe bombs, IEDs, UXO, UXB fuses, etc.



# AUROCH

*An operational partnership*

**ENIM**  
Systèmes Industriels

**KNDS**

**TEXELIS**



**ENIM**  
Systèmes Industriels

# AN OPERATIONAL PARTNERSHIP

SYSTEM &  
EARTH MOVING

**ENIM**  
Systèmes Industriels

MOBILITY

**TEXELIS**

DIGITALIZATION

**KNDS**





# CSI, MANUFACTURER OF HIGH PERFORMANCE VEHICLES

## Increase efficiency and safety

CNIM Industrial Systems **designs and manufactures special-purpose vehicles.**

Our vehicles are designed **to operate in harsh environments for specific applications.**

They handle operations of :

- Clearance,
- Landscaping,
- Ammunitions transport,
- Crossing
- ....

**Highly mobile and offering great stability,** our vehicles **ensure maximum safety for users and loads.**



# THE AUROCH, COMBAT ENGINEER VEHICLE

**Combat engineer companies** must be equipped with a vehicle that enables them both **to prepare the terrain and provide manoeuvre support for melee units.**

**AUROCH is** suited for use during conflicts and natural disasters in clearing rubble and roads. The AUROCH is the answer to the requirements of :



Land development



Protection



Mobility



Support for a joint forces manoeuvre



# THE AUROCH, COMBAT ENGINEER VEHICLE

**AUROCH** is able to adapt to each mission



# THE AUROCH, COMBAT ENGINEERING VEHICLE

Enhancing tactical capabilities of Land Forces



**Highly mobile** → manœuvrable & off-road vehicle



**Large earth moving capacity**



**Flexibility** → arm equipped with interchangeable tools



**Armored & armed** → safety of sappers



**Projection by air** → air transportable in A400M





# THE AUROCH, COMBAT ENGINEERING VEHICLE

## LOADER CAPACITY

### Digging a heavy tank firing position

Dimensions:

- 1.5m depth
- 4.5m width
- 12m length (5m 30% access ramp 7m for tank location)

Deadlines of one hour maximum

### Digging an anti-tank ditch

Dimensions:

- 1.5m deep
- 3.5m wide

Yield of 15m/h in length



# THE AUROCH, COMBAT ENGINEERING VEHICLE

## ARM CAPACITY

### Dig a trench:

- Dimensions: 90cm wide
- Depth from ground level: 2.5m minimum
- Yield of 15m/h in length

### Lift/Move a load:

- Mass: at least 3 tonnes
- Lifting height: at least 3 meters
- Useful range: at least 3 meters





**Meet us at EUROSATORY 2024**

**Hall 5a – Booth H127**