



XLP EQUIPMENT AND NEW TECHNOLOGIES

**OVERVIEW OF ECONOMIC AND
TECHNOLOGICAL JUSTIFICATION**

**Zlatko Pavicic, Project manager
DOK-ING Ltd**

October 8-9, 2009; Niagara-on-the-Lake, Ontario, Canada

A World of Opportunities



DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

DOK – ING Ltd

Mine clearance



Underground mining & excavation



Firefighting systems





DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

Technical Characteristics

MVD XLP

- **Prime Mover Dimensions**
(LxWxH) - 3480 x 1600 x 830
- **Weight**
4150 kg
- **Power engine**
diesel 120 kW (88 HP) at 2800 rpm
- **Driving speed**
Up to 3 km/h
- **Working speed**
0.3 – 1.2 km/h
- **Productivity**
50 - 120 t/h
- **Fuel capacity**
45 l
- **Propulsion**
Hydro static
- **Clearance**
130 mm
- **Operator with remote control**





DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

REASON TO USE THE XLP

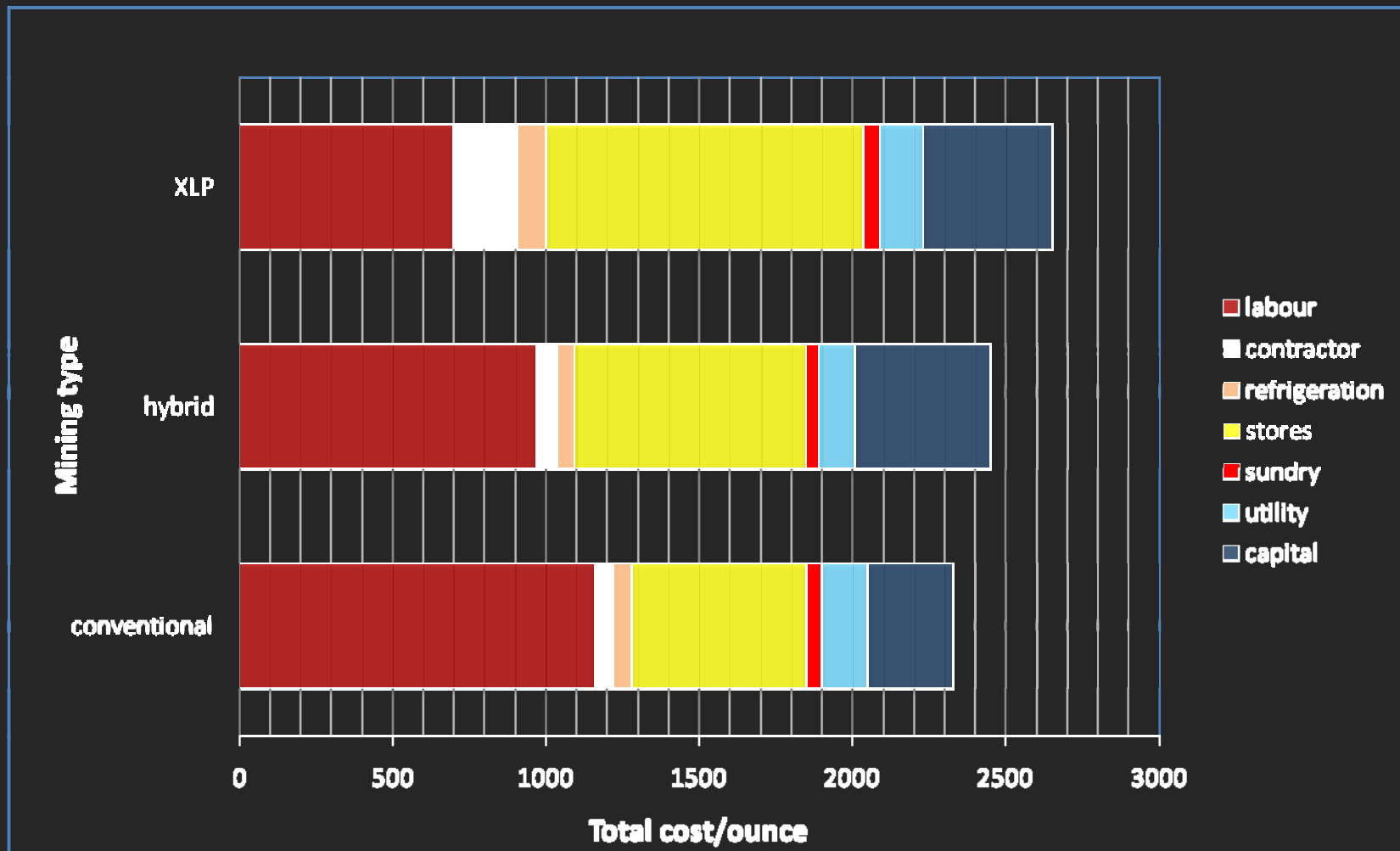
- ❖ **IMPROVED SAFETY,**
- ❖ **REMOTE CONTROL COMMUNICATION,**
- ❖ **INCREASE PRODUCTIVITY COMPARED TO CONVENTIONAL MINING**
- ❖ **USE THE MODERN MACHINERY INSTEAD OF CONVENTIONAL**
- ❖ **REDUCE THE RATE OF WASTE ROCK MATERIALS OR INCREASE THE AMOUNT OF USEFUL EXCAVATION,**
- ❖ **SPECIFICS OF THE BASIC FEATURES OF REQUIRED MINING METHODS.**



DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

COSTS

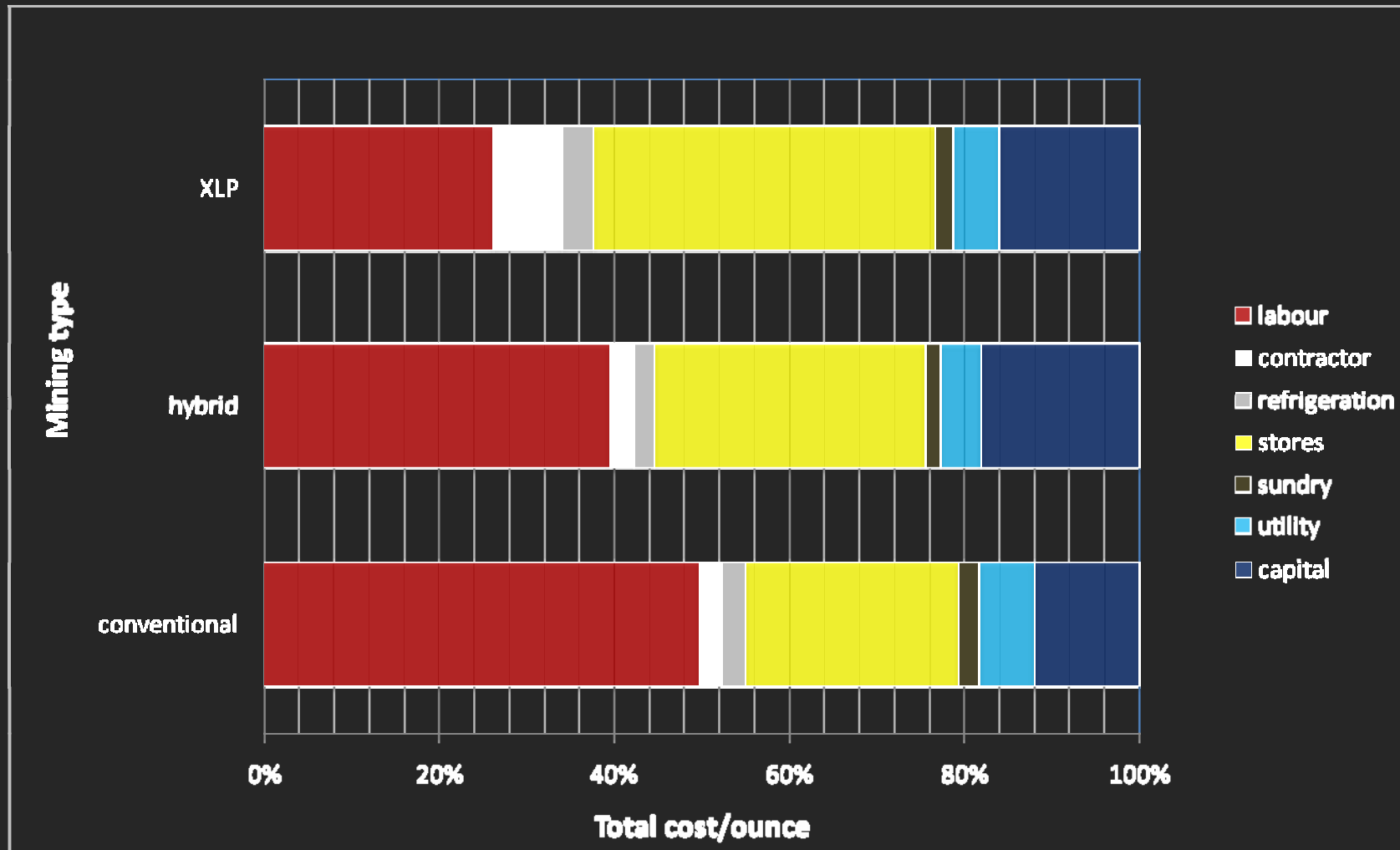




DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

COST STRUCTURE



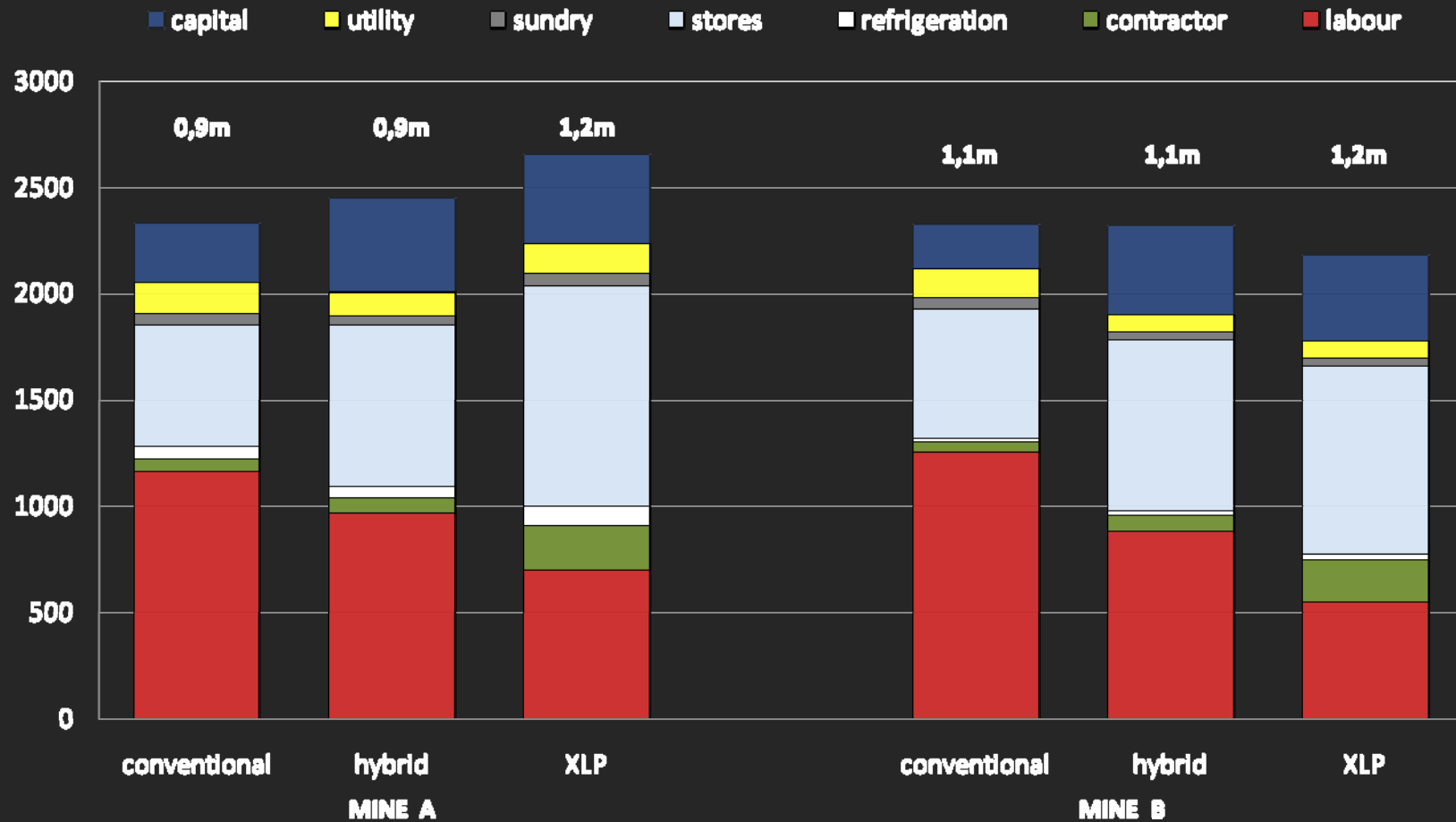


DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

TOTAL SPEND

TOTAL COST / OUNCE





DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

REQUIREMENTS ON XLP EQUIPMENT

- ❖ **SAFETY,**
- ❖ **PRODUCTIVITY,**
- ❖ **SIMPLICITY, & MODULARITY,**
- ❖ **INTEGRITY & AUTOMATION,**
- ❖ **LOWER COSTS,**
- ❖ **EASY OPERATION AND MAINTENANCE,**
- ❖ **TAILOR-MADE EQUIPMENT & SIZE REDUCTION**
- ❖ **OPTIMIZATION AND STANDARDIZATION**
- ❖ **ABILITY TO WORK IN 90 - 160 CM STOPE WIDTHS**
- ❖ **INCREASE EFFICIENCY AND PRODUCTIVITY IN THE AVERAGE INCLINATION OF 22°**
- ❖ **TRACTION STABILITY AT 30°**



DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

IMPROVING THE EXISTING EQUIPMENT

- ❖ **SIMPLIFY THE USE OF EXISTING EQUIPMENT**
- ❖ **IMPROVE THE MANAGEMENT AND CONTROL**
- ❖ **IMPROVE THE SAFETY OF OPERATORS AND WORKING ENVIRONMENT**
- ❖ **REDUCE THE MASS OF EQUIPMENT USING NEW MATERIALS**
- ❖ **ALLOW THE USE OF NEW TECHNOLOGICAL PROCESSES IN PRODUCTION**
- ❖ **INCREASE PRODUCTIVITY**
- ❖ **INCREASE EQUIPMENT CAPACITY PER UNIT OF TIME**
- ❖ **REDUCE PRODUCTION COSTS**



DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

NEW MINING EQUIPMENT CAPABILITIES

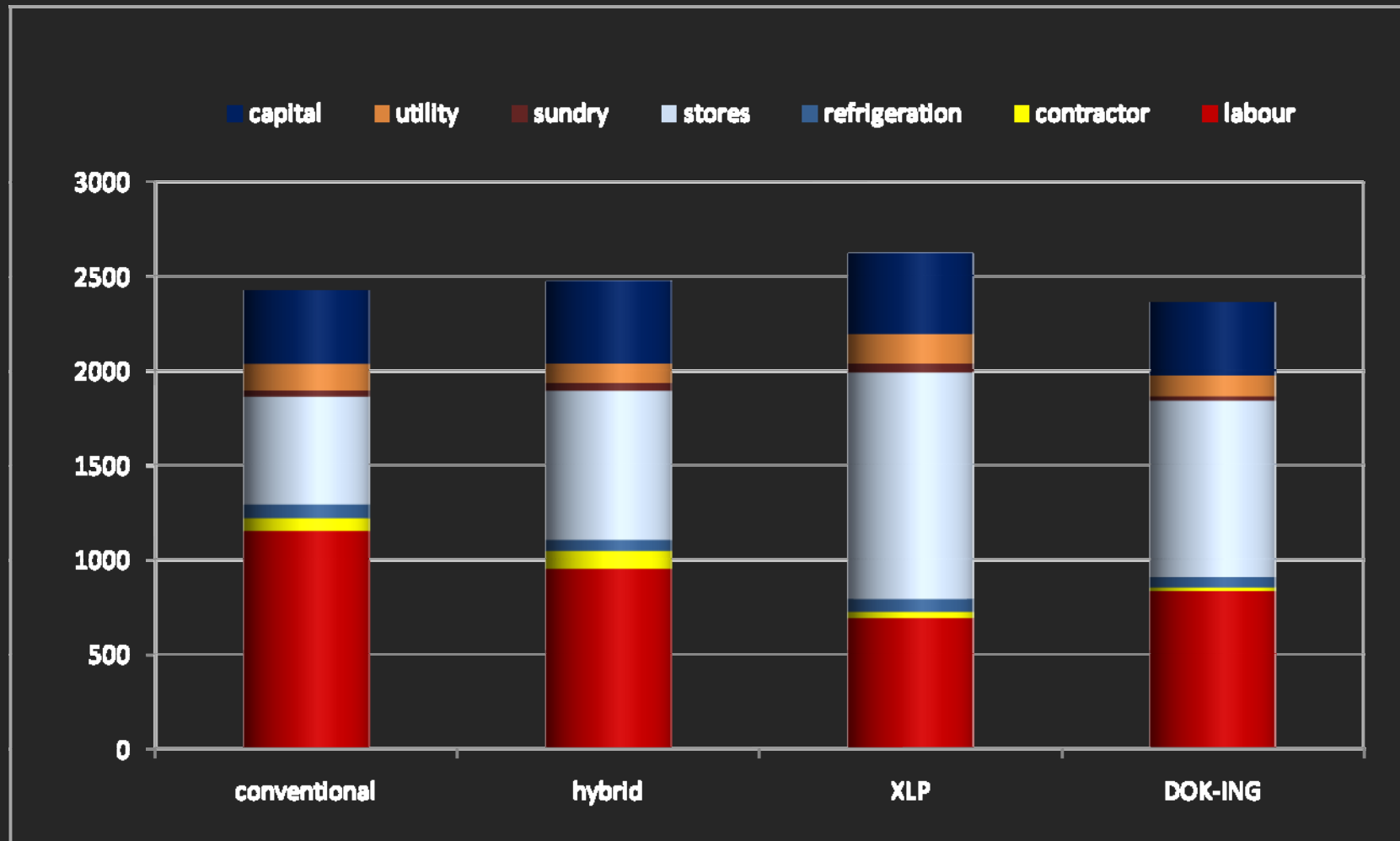
- ❖ **REDUCE THE COST OF INVESTING**
- ❖ **REDUCE THE PRODUCTION COSTS**
- ❖ **INCREASING PRODUCTIVITY & EXTRACTION**
- ❖ **IMPROVE EQUIPMENT EFFICIENCY**
- ❖ **INCREASE THE RATIO OF INVESTED CAPITAL AND GAIN**
- ❖ **ENSURE THE SUSTAINABILITY OF THE SYSTEM AND DEVELOPMENT**



DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

TOTAL COSTS

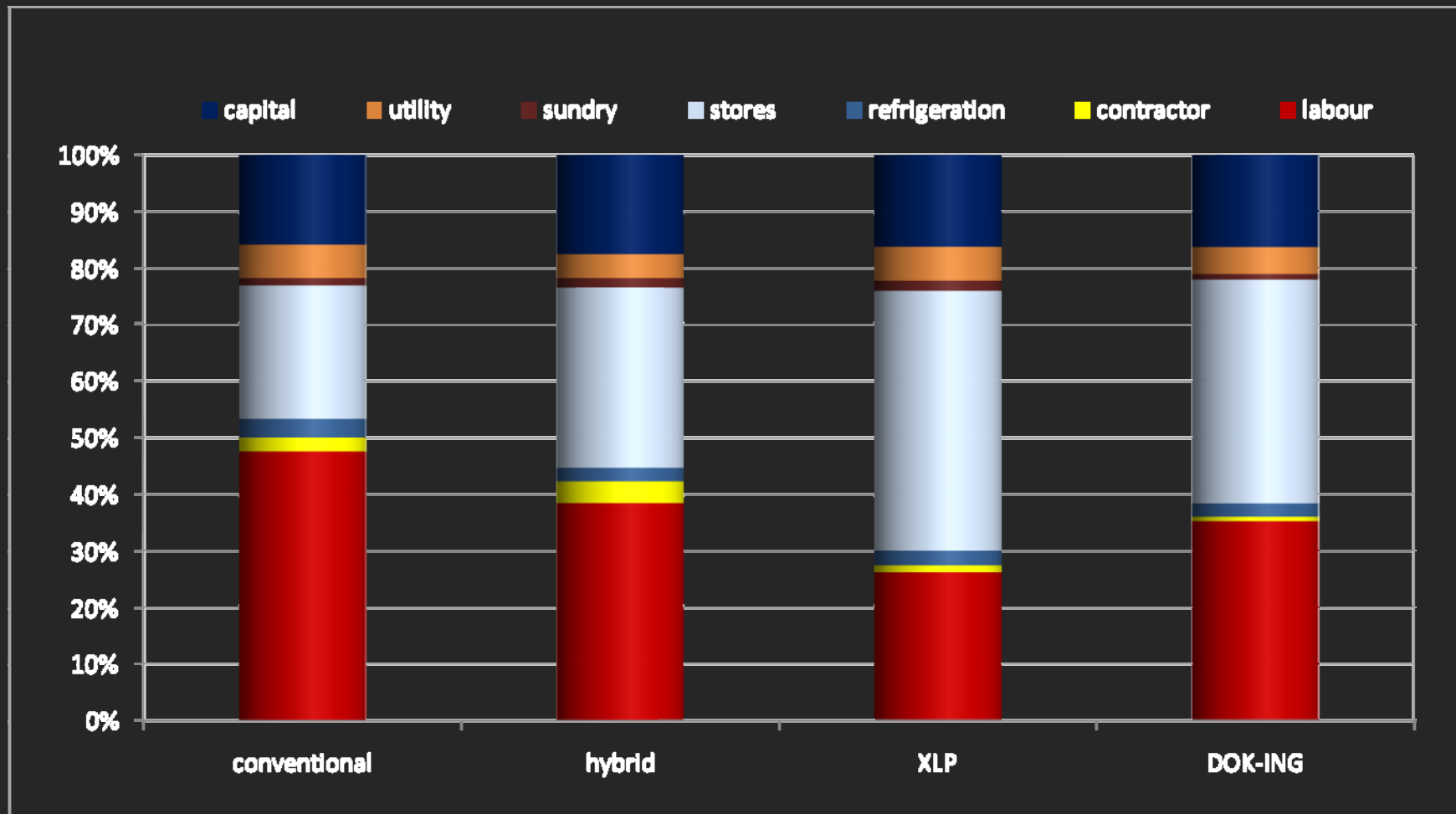




DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

COST STRUCTURE

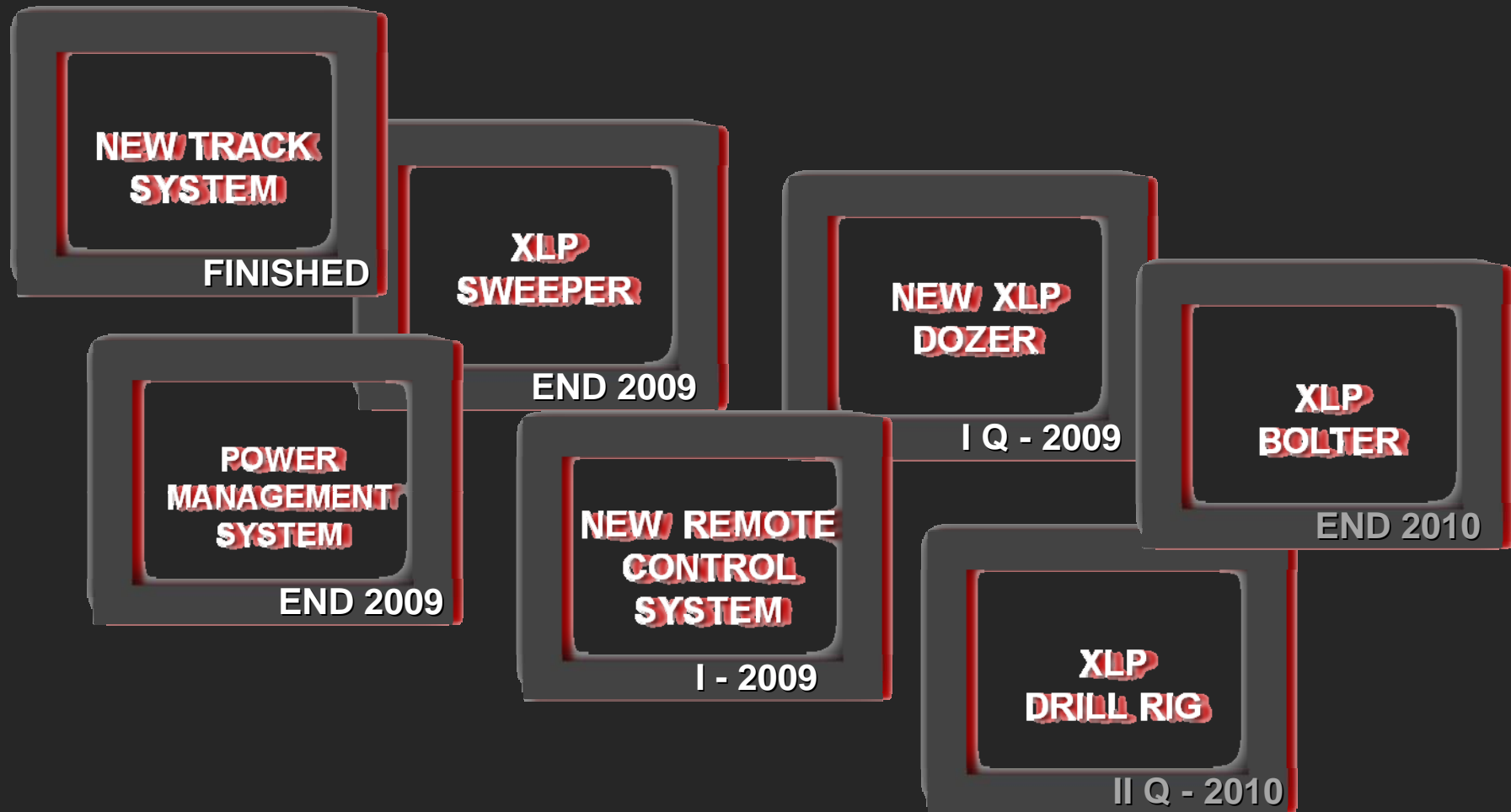




DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

INNOVATIONS & NEW PRODUCTS





DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

NEW PRODUCT

Technical characteristics

FFRV - 4

- **Dimensions**
(L x W x H) – 3000 x 1800 x 1400
- **Weight**
about 6 t
- **Payload**
up to 3 metric tonnes
- **Ground pressure**
0,07 MPa
- **Power engine**
Perkins 129 kW (173,8HP)
- **Fire fighting**
Water, foam or combination
- **Tool**
dozer blade with gripper – up tp 500 kg
- **Water and foam tanks volume**
up to 2500kg





DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

Technical characteristics FFRV - 4

- **Tank**
water - 1400 liters
foam - 500 liters
- **Water pump**
2000 l/m
- **Water cannon**
1600 l/m
- **Range**
50 m
- **Speed**
up to 6 km/h
- **Scope**
longitudinal -30°
- **Remote control**
up to 2000m
- **Thermal camera**
- **Three video cameras**





DOK-ING
DON'T SEND A MAN TO DO A MACHINE'S JOB

Minjng Magazine

ISSN 1841-0001-2000
Certificate Registration
No. 04100/2005/0004

DOK-ING R&D STRATEGY

- 1. THE BEST POSSIBLE QUALITY**
- 2. SAFETY AND SECURITY**
- 3. REMOTE CONTROL**
- 4. SIMPLE TO OPERATE**
- 5. WORKING IN ALL CONDITIONS**
- 6. PRODUCTIVITY AND PROFITABILITY**
- 7. SIMPLE FOR TRANSPORT AND MAINTENANCE**
- 8. OWN DESIGN, DEVELOPMENT & TECHNOLOGY**
- 9. EDUCATED & SKILLED WORKERS AND MANAGEMENT**

DOK-ING d.o.o.; Zitnjak
10000 Zagreb; Croatia
phone: +385 1 2481 384; fax: +385 1 2481 303
e-mail: z.pavacic@dok-ing.hr
mob: +385 91 4825 750
www.dok-ing.hr

Minjng Magazine

DON'T SEND A MAN TO DO A MACHINE'S JOB

QUESTIONS ?

Zlatko Pavicic
Project Manager
DOK-ING d.o.o.; Zitnjak
10000 Zagreb; Croatia
phone: +385 1 2481 384; fax: +385 1 2481 303
e-mail: z.pavacic@dok-ing.hr
mob: +385 91 4825 750
www.dok-ing.hr

YOURS

DOK - ING

A World of Opportunities