FORMATION OF A STRATEGIC PORTFOLIO OF DIGITAL PROJECTS

IF	Financial capacity
ID	Digital development
P	Project priority
B	Investment budget

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2026

A financially bounded portfolio: six decision stages

01 Diagnose

2025 financial position + digital development

02 Screen

Eligibility, safety and technical dependencies

03 Prioritize

Economic effect, urgency, feasibility, scalability

04 Budget

Revenue-linked investment intensity

05 Allocate

Project-weighted conditional funding

06 Rebalance

Stage gates, KPIs and liquidity checks

Financial baseline: 2025 legal-entity data

Enterprise	Revenue, UAH mn	Net profit, UAH mn	Net margin, %	Equity ratio, %
Metinvest	13,223.9	−8,339.3	−63.06	−82.92
Zaporizhstal	72,014.2	2,175.6	3.02	56.28
ArcelorMittal Kryvyi Rih	70,634.4	−9,668.1	−13.69	14.04
INTERPIPE NTZ	7,051.5	80.7	1.15	37.94
Kryukiv railway works	2,617.2	−124.6	−4.76	n/a

Net margin = net profit / revenue × 100 | Equity ratio = (assets − liabilities) / assets × 100

Diagnostic positioning: financial capacity vs digital level

Enterprise	IF	ID	Portfolio logic
Metinvest	0.126	0.800	Digital capability > financing
Zaporizhstal	0.820	0.600	Expansion opportunity
ArcelorMittal Kryvyi Rih	0.174	0.400	Dual constraint
INTERPIPE NTZ	0.625	1.000	Selective advanced projects
Kryukiv railway works	0.969	0.600	Core-system integration

IF: financial support index

ID: digital development index

How composite diagnostics can be reconstructed

FINANCIAL INDEX · proposed protocol

$$IF = (z_1 + z_2 + z_3 + z_4 + z_5) / 5$$

$$z^+ = (x - L) / (U - L)$$
$$z^- = (U - x) / (U - L)$$

Liquidity · equity · operating margin · debt · capital coverage

DIGITAL INDEX · proposed protocol

$$ID = (d_1 + d_2 + d_3 + d_4 + d_5) / 5$$

Scoring anchors: 0 / 0.5 / 1

ERP–MES–PLM · IIoT · data governance · AI analytics · cyber resilience

Strategic priority: weighting plus a worked example

$$P_j = 0.35\,E_j + 0.25\,U_j + 0.20\,F_j + 0.20\,S_j$$

35%	Expected effect
25%	Urgency
20%	Financial feasibility
20%	Scalability

Zaporizhstal MES (illustrative): 0.35 × 5 + 0.25 × 5 + 0.20 × 4 + 0.20 × 5 = 4.80

Project screening: 15 illustrative priorities

Company	Digital project	P (1–5)
Metinvest	Industrial data + predictive maintenance	4.60
	Digital twins of critical equipment	4.00
	OT cyber resilience / redundancy	4.25
Zaporizhstal	MES + operational planning	4.80
	AI quality + computer vision	4.55
	Energy management + IIoT	4.60
AMKR	Digital energy management	4.60
	Predictive maintenance of critical units	4.40
	Production–financial data lake	3.80
INTERPIPE NTZ	AI planning + yield optimization	4.55
	Digital twins + predictive quality	4.35
	Zero Trust + cyber recovery	4.25
Kryukiv works	ERP–MES–PLM integration	5.00
	Digital product passport	4.20
	IIoT quality + predictive maintenance	4.35

Investment intensity: transparent scenario calculation

$$d_i = \min [\ 2.5\% ;\ 0.8\% + 1.4\% \times IF_i + 0.8\% \times (1 - ID_i)\ ]$$

Enterprise	IF	ID	1.4 × IF (pp)	0.8 × (1−ID) (pp)	d, %
Metinvest	0.126	0.800	0.1764	0.1600	1.1364
Zaporizhstal	0.820	0.600	1.1480	0.3200	2.2680
AMKR	0.174	0.400	0.2436	0.4800	1.5236
INTERPIPE NTZ	0.625	1.000	0.8750	0.0000	1.6750
Kryukiv works	0.969	0.600	1.3566	0.3200	2.4766

Digital budget: revenue × target intensity

$B_i = R_i \times d_i$ | Metinvest: 13,223.902 × 0.011364 = UAH 150.3 mn

Enterprise	Revenue 2025 (UAH mn)	d (%)	Indicative B (UAH mn)
Metinvest	13,223.9	1.136	150.3
Zaporizhstal	72,014.2	2.268	1,633.3
ArcelorMittal Kryvyi Rih	70,634.4	1.524	1,076.2
INTERPIPE NTZ	7,051.5	1.675	118.1
Kryukiv railway works	2,617.2	2.477	64.8

Allocation example: priority share → project budget

$$w_{ij} = P_{ij} / \Sigma P_{ik} \quad ; \quad B_{ij} = B_i \times w_{ij}$$

Enterprise	Project	P	Share (%)	UAH mn
Zaporizhstal	MES / operational planning	4.80	34.4	562.0
	AI quality / vision	4.55	32.6	532.7
	Energy / IIoT	4.60	33.0	538.6
Kryukiv railway works	ERP–MES–PLM	5.00	36.9	23.9
	Digital product passport	4.20	31.0	20.1
	IIoT quality / PdM	4.35	32.1	20.8

Financing architecture: tailored instrument mix

Enterprise	Internal (%)	Bank / IFI (%)	Vendor / lease (%)	Guarantee / blended (%)	Grants / TA (%)
Metinvest	35	25	20	15	5
Zaporizhstal	45	25	15	10	5
AMKR	30	30	15	20	5
INTERPIPE NTZ	45	20	15	15	5
Kryukiv works	55	15	20	5	5

Guarantees are risk sharing; do not add their nominal coverage to available project cash.

Stage-gate governance and research conclusion

GATE 0	Verified case, cyber/safety, funding eligibility
GATE 1	Pilot versus technical and economic KPI baseline
GATE 2	Positive remaining NPV, liquidity and scale approval
GATE 3	Benefits realization and portfolio learning

Core contribution: an integrated sequence from diagnosis → priority → bounded budget → conditional allocation → KPI-based revision.