



CLUB OF BOLOGNA
*strategies for the development of agricultural
mechanisation*



34th Members' Meeting of the «Club of Bologna

Mechanisation and Technologies for New Farmers Needs

11-12 October 2025
Bari, Italy

The Use of AI for Productivity and Safety in Agricultural Machinery



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CTO



Safety **vs** Productivity



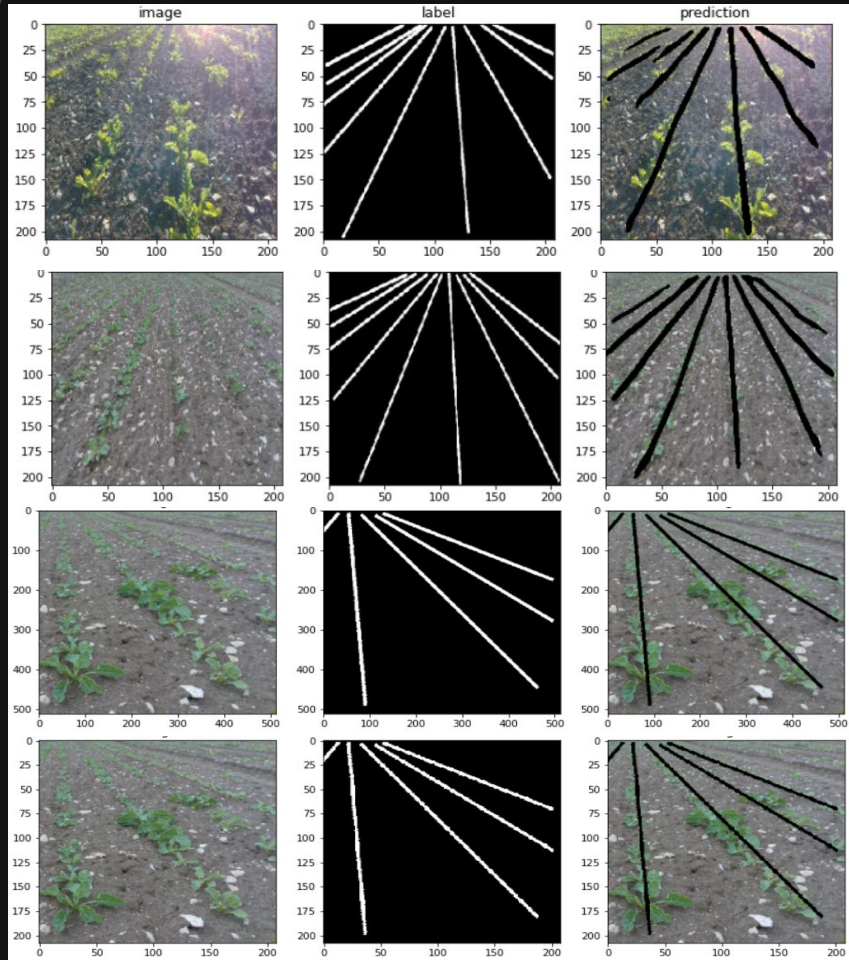
Safety



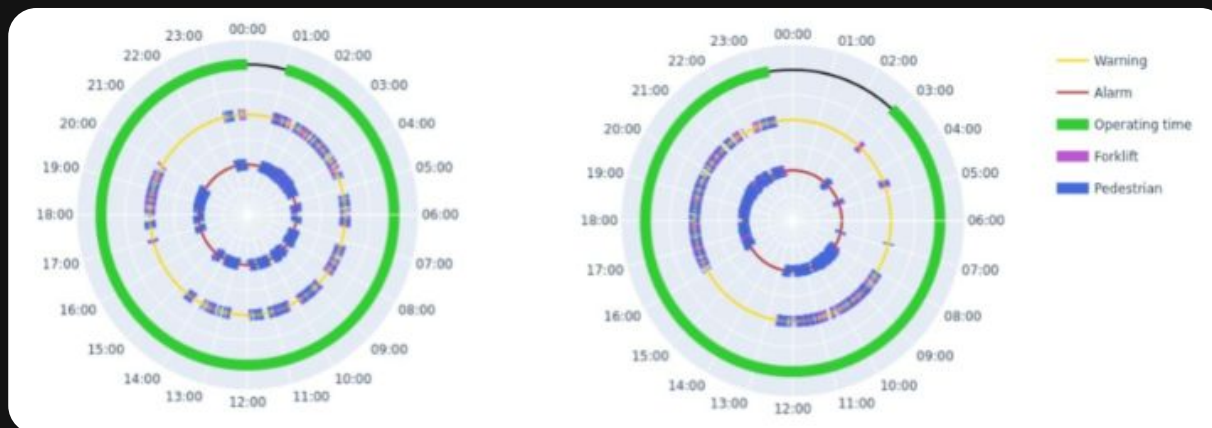
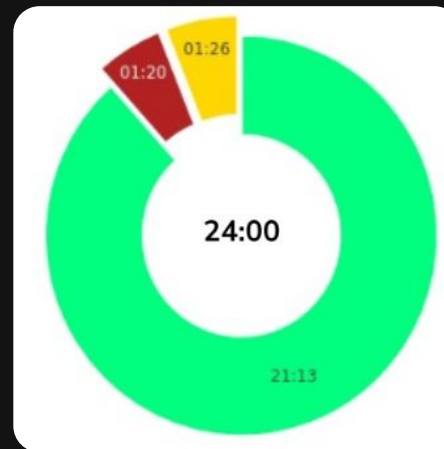
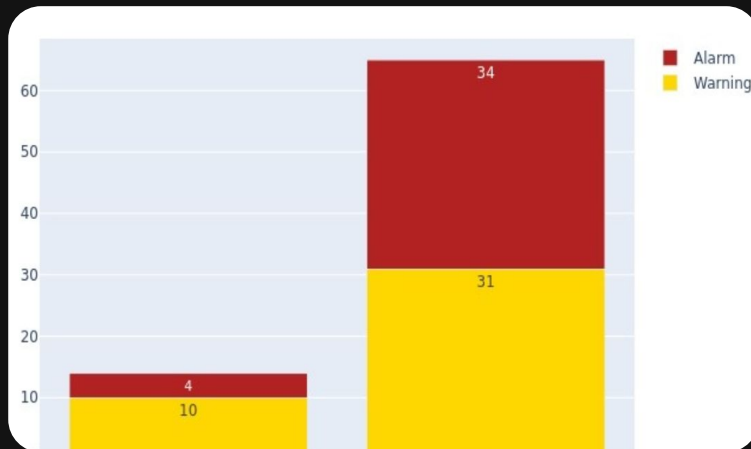
Safety



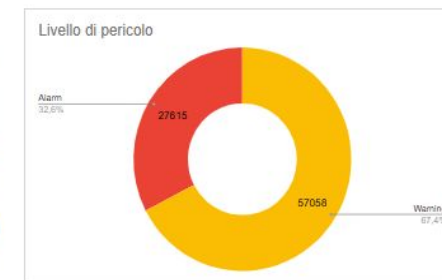
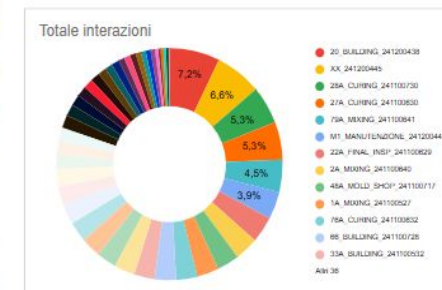
Productivity



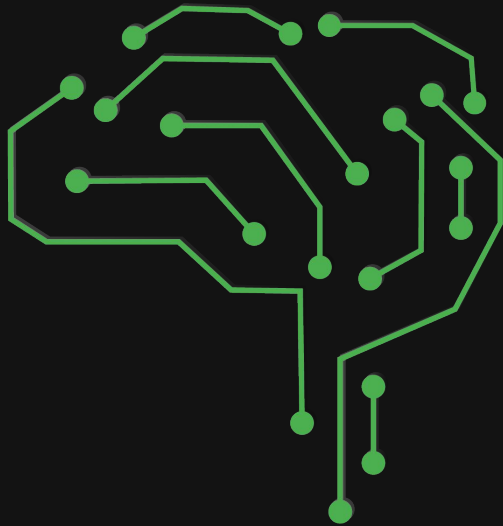
Safety and Productivity



COUNTA di Vehicle	Event level		Totale generale
	Warning	Alarm	
20_BUILDING_241200438	3034	3067	6101
XX_241200445	2699	2902	5601
28A_CURING_241100730	3593	882	4475
27A_CURING_241100630	3684	785	4469
79A_MIXING_241100641	3021	780	3801
M1_MANUTENZIONE_241200443	2335	942	3277
22A_FINAL_INSP_241100629	2268	830	3098
2A_MIXING_241100640	2493	358	2851
48A_MOLD_SHOP_241100717	2359	308	2665
1A_MIXING_241100527	2342	290	2632
76A_CURING_241100632	2076	496	2572
66_BUILDING_241100728	1916	650	2566
33A_BUILDING_241100532	1242	1280	2522
49_MOLD_SHOP_241200448	1677	775	2452
3A_MIXING_241100635	2124	290	2414
28A_CURING_241100631	1896	511	2407
21_241200426	835	1535	2370
8A_CUTTING_241100729	1847	514	2361
35A_BUILDING_241100634	1136	1023	2159
40A_BUILDING_241100743	1132	1008	2138
37A_BUILDING_241100541	739	923	1662
46A_WAREHOUSE_DEP_24110073	1242	388	1628
78A_EXTRUDING_241100745	966	614	1600
32A_BUILDING_241100714	794	741	1535
38A_BUILDING_241100639	754	631	1385
47A_WAREHOUSE_DEP_24110071	964	315	1299
7A_CALANDRE_241100538	890	316	1206
31A_BUILDING_241100593	605	559	1164
9A_241200454	603	515	1118
241200446	784	213	997
61A_EHS_241200440	657	276	933
16A_241200444	530	383	913
42A_241100713	254	487	741
38_241200436	375	362	737
44A_WAREHOUSE_DEP_24110073	610	108	718
241200432	322	308	630
41A_241200452	386	212	598
5A_241200437	306	274	580
45A_WAREHOUSE_DEP_24110073	460	94	554
29A_CURING_241100736	290	82	372
30_CURING_241200439	149	177	326
19A_241200442	196	125	323
62A_EHS_241100715	268	53	321
12_BEAD_241100636	102	196	298
81A_BUILDING_241200427	43	26	69
21A_241100722	6	9	15
39A_BUILDING_241100642	5	4	9
74_WAREHOUSE_DEP_241100708	6		6
17A_241200449	1	4	5
Totale generale	57058	27615	84673



AI 101



“The study is to proceed on the basis of the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it.”

— John McCarthy et al., *Dartmouth Proposal*, 1955



Higher selectivity



Higher efficiency



Increased operator
satisfaction



Enhanced safety

AI 101

DOG!



AI 101

yet another
DOG



AI 101

DOG ?!



AI 101

DOG ?!



AI 101

not a
DOG ?!



AI 101

DOG ?!

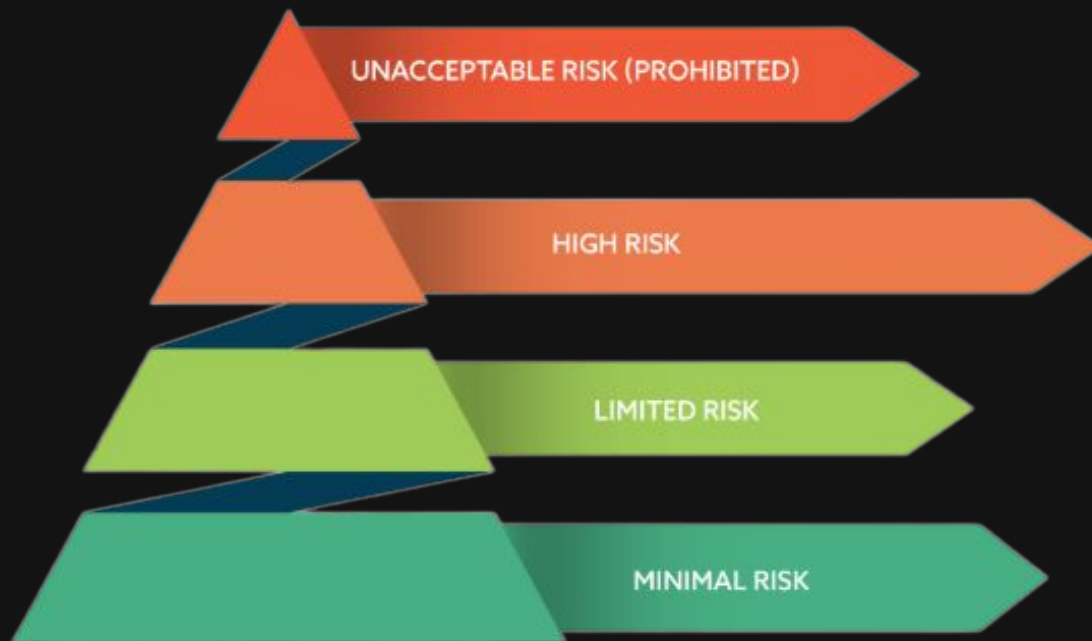


AI in real life



AI Act

Classification of systems based on risk for the individuals



Art. 5 - **prohibited**

manipulation, social classification, biometric identification

Art. 6 et seq. - **allowed with conformity assessment**
systems with a high risk of infringing the fundamental
rights of individuals or functional safety systems

Art. 52 - **allowed with transparency obligations**
systems must explicitly declare the use of AI

Art. 69 - **no restrictions**

Compliance

Limited risk systems

1. Inform users that they are interacting with AI
2. State system limitations in the user manual
3. Ensure transparency (labels, warnings)
4. Include as accessory in technical file, not a safety component
5. No audits or additional certification required
6. No impact on the machine's CE declaration

Compliance

High risk systems

7. Implement risk management and quality system
8. Provide detailed technical documentation (datasets, testing, logs)
9. Register the system in the EU high-risk AI database
10. Ensure mandatory human oversight
11. Subject to audits, conformity assessment, and authority checks
12. Must be included in the CE declaration as a safety-critical component

How we do it



- Start easy with a limited risk system
- Proprietary neural network and dataset
- Audit-proof management system
- Compliance by design



Kiwitron

Your innovation partners

