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Understanding Inhouse ink logistics

- GSE at a glance
- Introduction to inhouse ink logistics
- Lean ink management
- Automated ink dispensing
- Reusing of press return inks
- Color matching inks
- Traceability
- Summary



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GSE at a glance

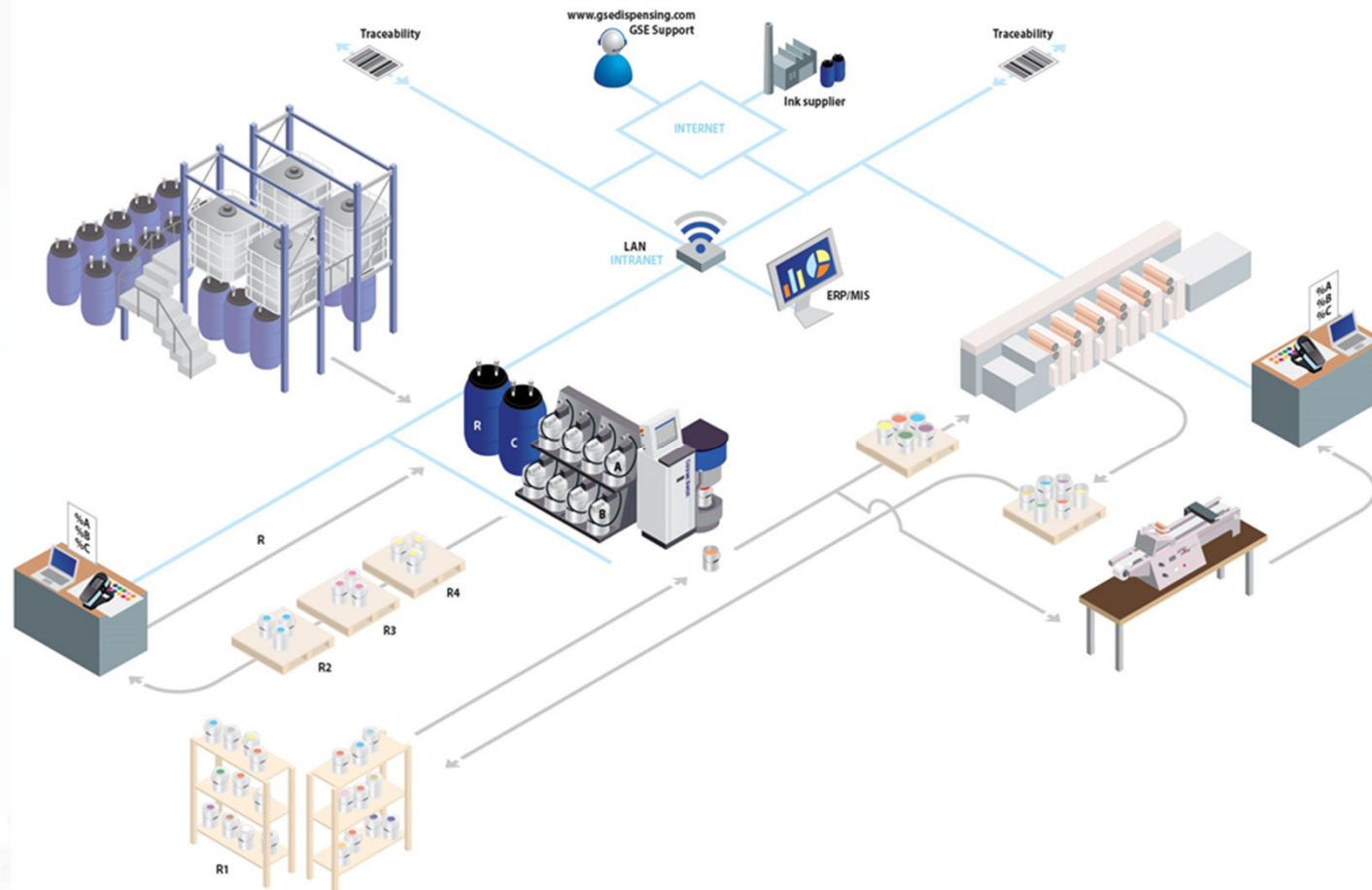


- GSE delivers robust, fast and smart dispensing equipment, software and services
- To minimize ink-related waste in the printing workflow
- More than 40 years experience in graphics, textiles and coating
- Headquarters in the Netherlands, with local presence in USA, Brazil and Czech Republic
- Global network of sales agents and service representatives
- > 1700 installations, world-wide



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Inhouse ink logistics



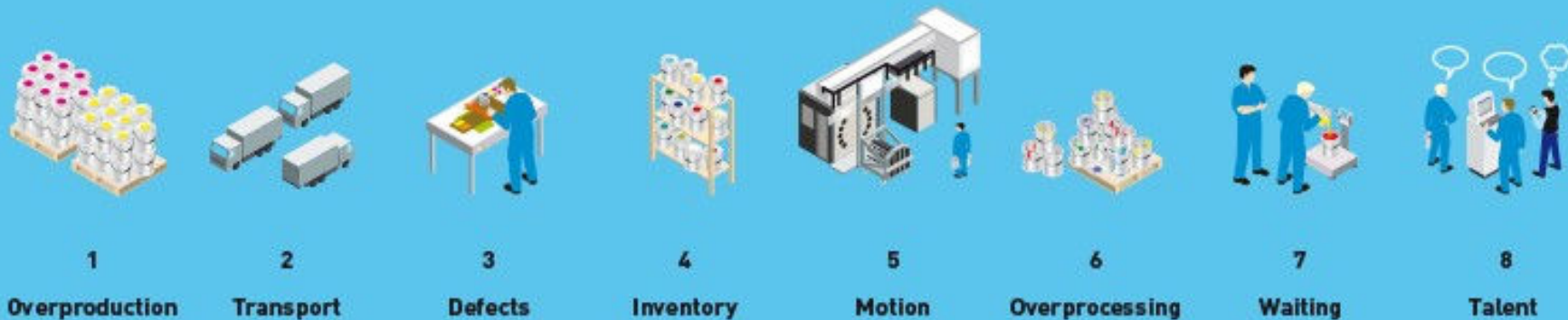
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Lean ink management

“Eliminate the expenditure of all ink-related resources for any goal other than the creation of value for the end customer”

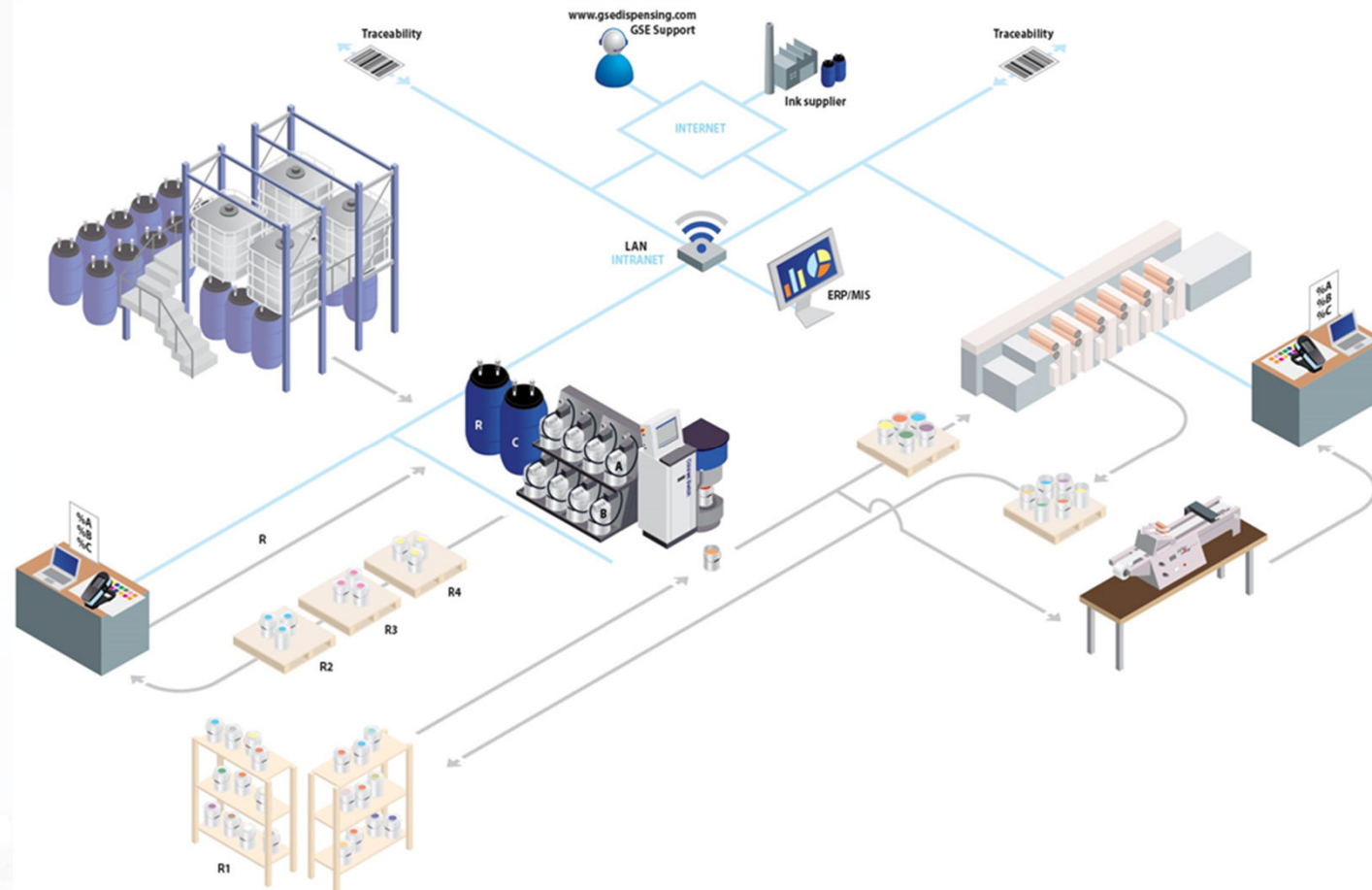


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Automated ink dispensing



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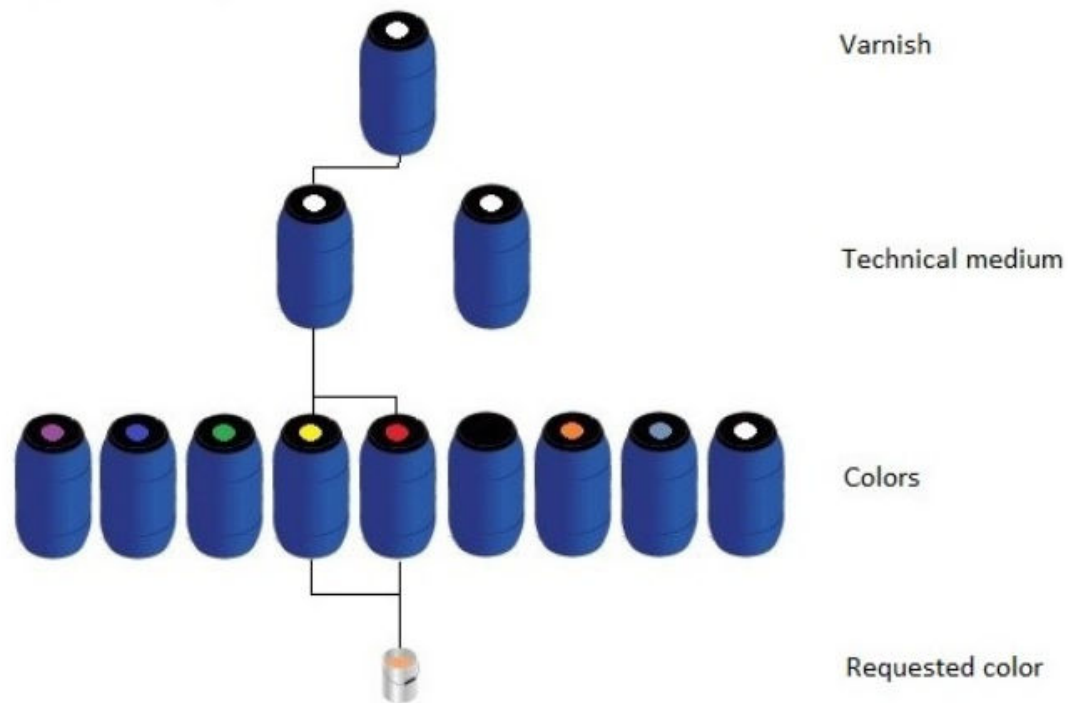
Automated ink dispensing

- Dispense recipes made from base components automatically
- Instant availability of exact colors
- Precise quantities for the job
- No need to purchase ready-mixed colors, or excess amounts “just-in-case”
- Ordering base components saves transport, warehousing and administration costs
- Supply chain management



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Standardization trend in industry



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Hardware selection parameters

- Ink type used (SB, WB, UV or LED)
- Ink viscosity and rheology
- Production batch sizes and accuracy
- Required production capacity
- Number and type of base components
- Current and future workflows

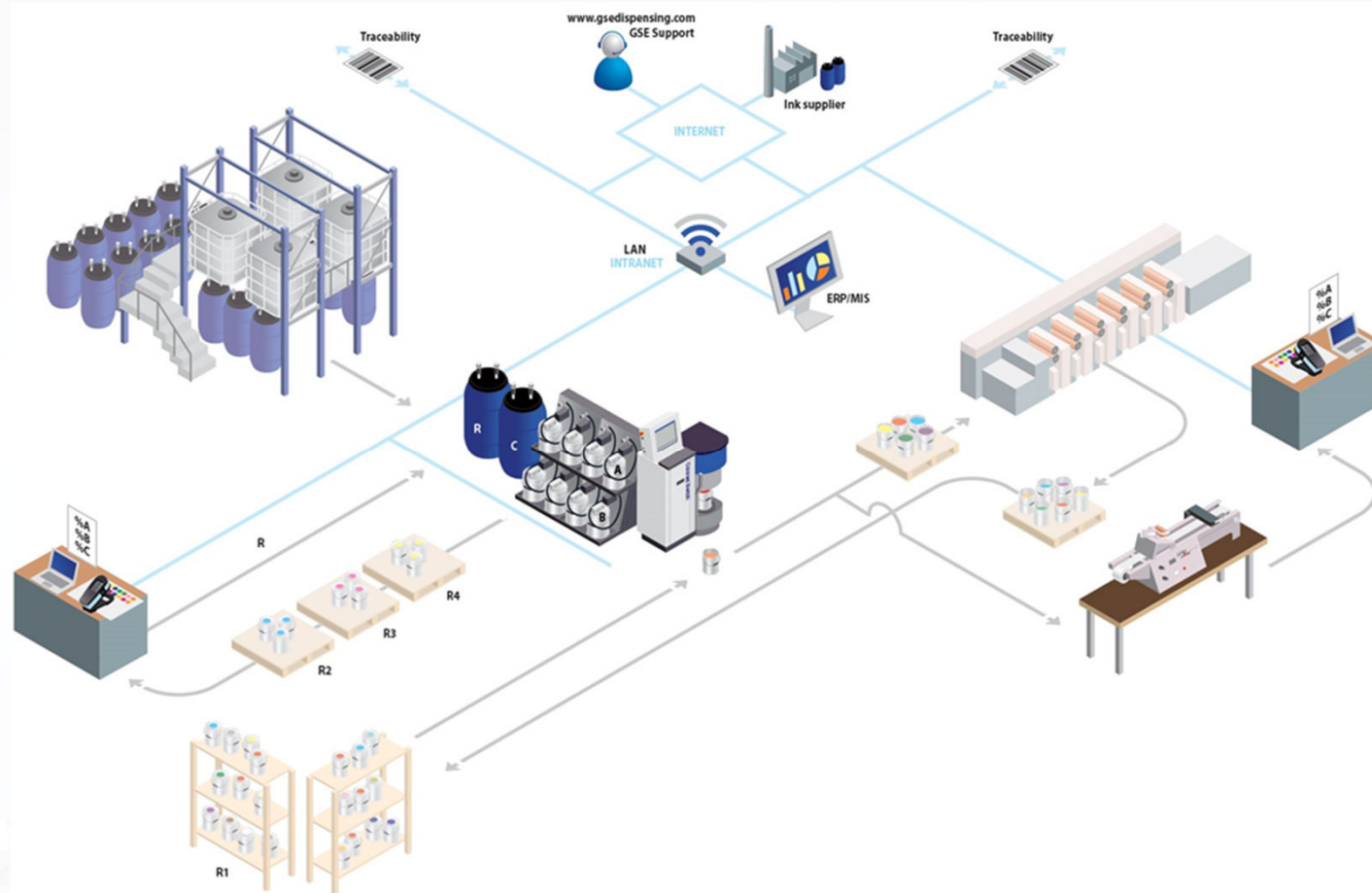


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Reusing of press return inks



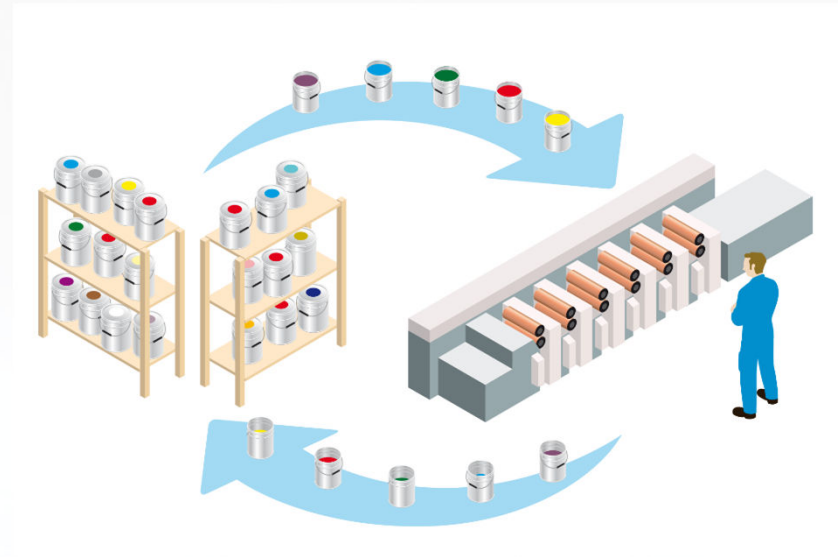
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Reusing of press return inks

- By individual containers
- By producing 'clusters'
 - Collect return inks
- By using 'substitutes'
- Prepare or reserve returns

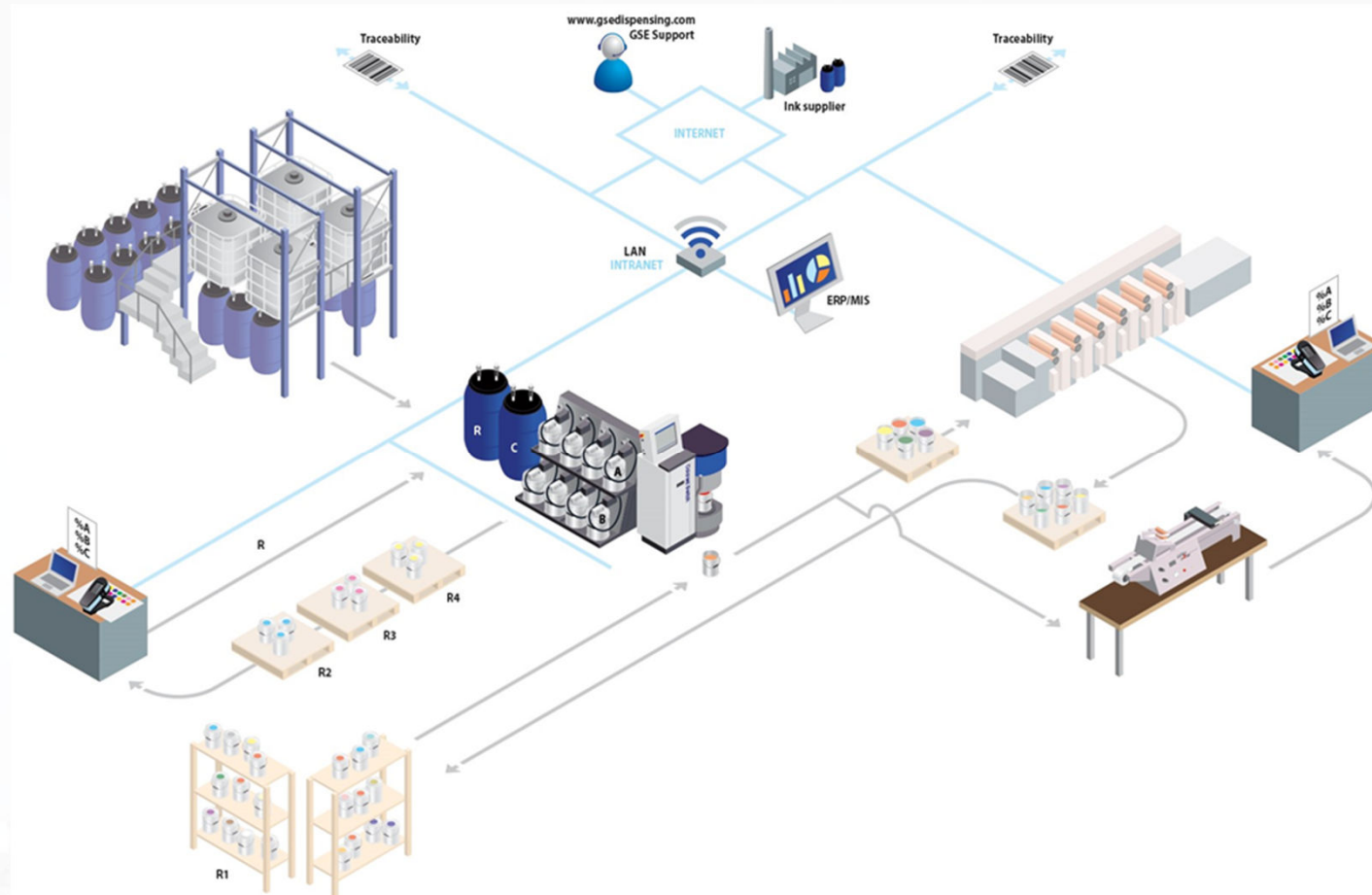


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Color matching



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New colors

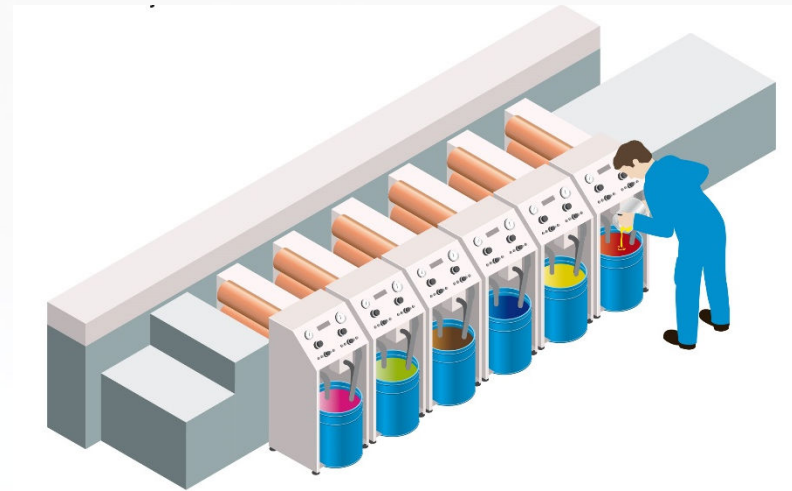
- Mix samples with formulas or by component dispensing
- By using experience and eye judgment
- Or with a spectrophotometer and color formulation software (CFS)
- Sent new formulas from CFS directly to Ink management software
- Reuse the returned ink for constructing another color
- Use a test press to boost printing press productivity



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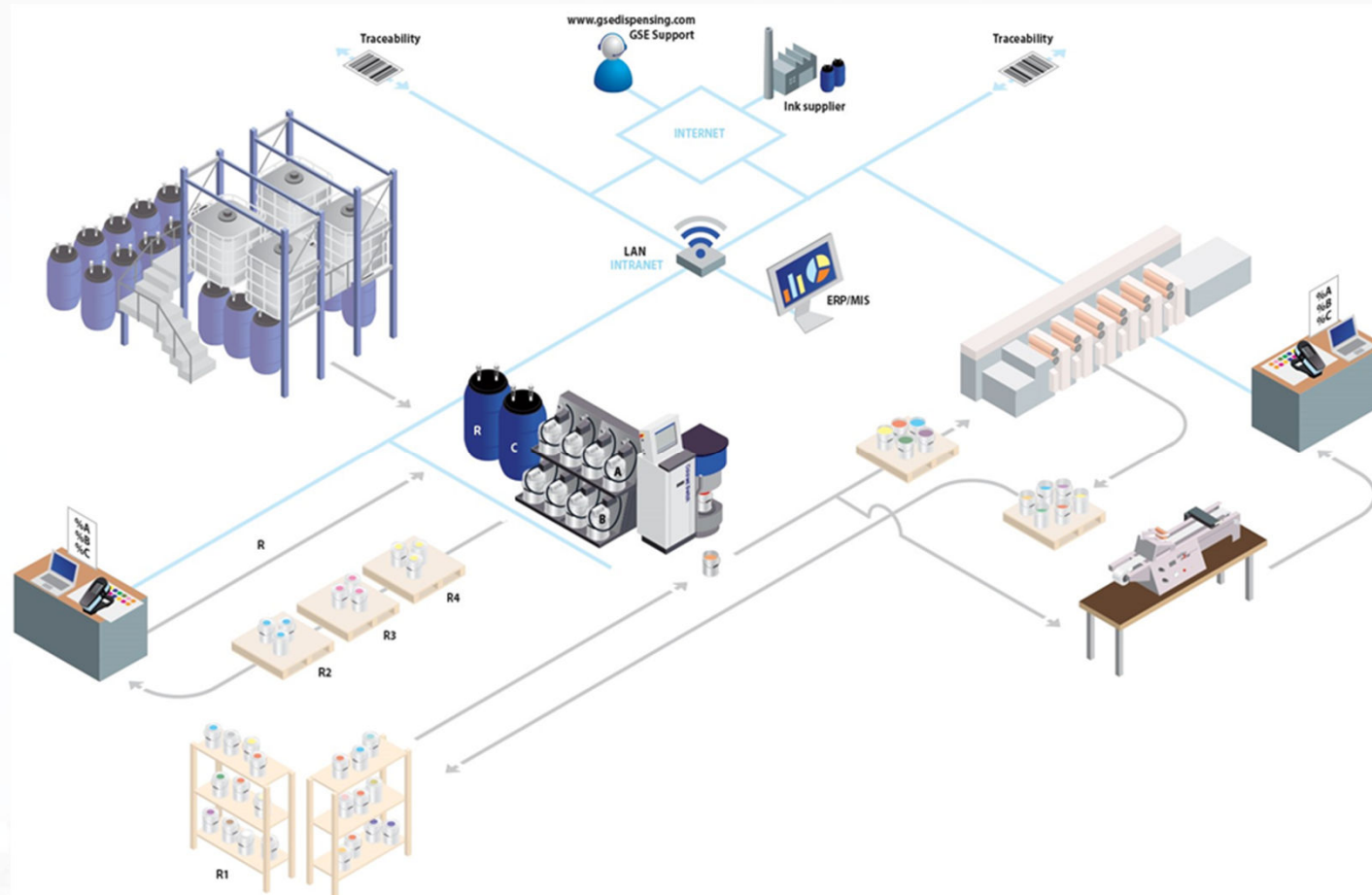
Color corrections

- Start to adjust press settings
- Correct formula in ink supply container manually
- Or with CFS
- Temporarily corrections to the container or permanent corrections to the formula
- Reorder with correct colour
- Reuse return containers with corrections



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Traceability



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Traceability

- Instant access to batch information of base components
- Batch-to-order or order-to-batch
- Traceability data including expiry dates and return ink containers used



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Example traceability report

Traceability report for batch code

Batch code **Batch-002B**
 Component **BC_002 Blue**
 Name **Blue**
 Date of first use **07-03-2017**
 Expiry **12-12-2017**

Container	Parts	Weight	Order	Formula	Produced	Expiry
12/1	18.18	1.623		REC_005	08-03-2017 11:34:51	12-12-2017
13/1	9.09	0.992		REC_007	08-03-2017 11:35:34	02-05-2017
21/1	30.00	4.167	Test	REC_Compound	08-03-2017 11:42:03	02-05-2017
33/1	30.00	2.700		REC_Compound	10-03-2017 14:23:34	
22/1	6.00	0.893	Test	REC_Macro	08-03-2017 11:28:53	02-05-2017
22/2	6.00	0.893	Test	REC_Macro	08-03-2017 11:29:28	02-05-2017
23/1	33.29	0.992			08-03-2017 16:25:26	19-03-2017
34/2	5.96	0.059		REC_Macro	10-03-2017 14:53:18	02-05-2017

Trace returns on batch code

Return store	Return location	Position	Position index	Container number/index	Formula	Total contents	Weight	Parts	Expiry
Main store	Location	Position-001	2	22/1	REC_Macro	8.000	0.480	6.00	02-05-2017
Main store	Location	Position-001	3	23/1		7.500	0.992	33.29	19-03-2017
Main store	Location	Position-006	2	13/1	REC_007	7.700	0.700	9.09	02-05-2017
No. of items		3				Total 23.20	2.17		
Total		3				23.20	2.17		

Batch code previous and following barrel

Next barrel

Batch code	Machine	System	Mutation date	Remaining	Expiry	New weight	Operator
Batch-002C	Test-IMS.NET	2	07-09-2017	19.000	12-01-2018	219.000	Operator

Previous barrel

Batch code	Machine	System	Mutation date	Remaining	Expiry	New weight	Operator
Batch-002A	Test-IMS.NET	2	01-02-2017	189.416	12-10-2017	289.416	Management



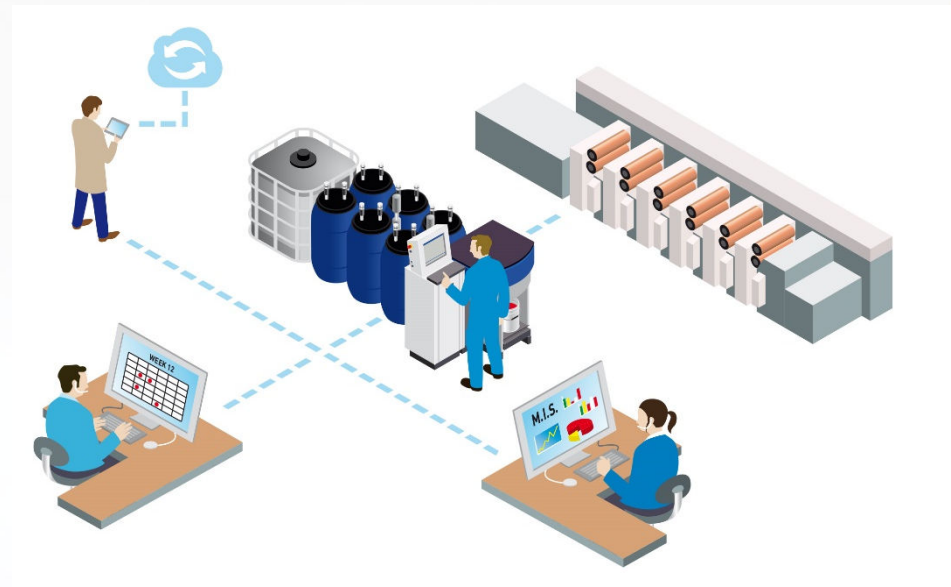
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Road map to Lean ink logistics

1. Ink dispensing & ink management
2. Color management
3. Ink proofing
4. Business process integration



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Summary: key benefits

- Reduce ink cost with up to 30% by
 - buying base components instead of ready-mixed inks
 - recycling return inks
 - minimizing stock
- Meet brand expectations in terms of color consistency and trace-ability
- Boost your press productivity by hundreds of hours
- Prevent rework and human errors



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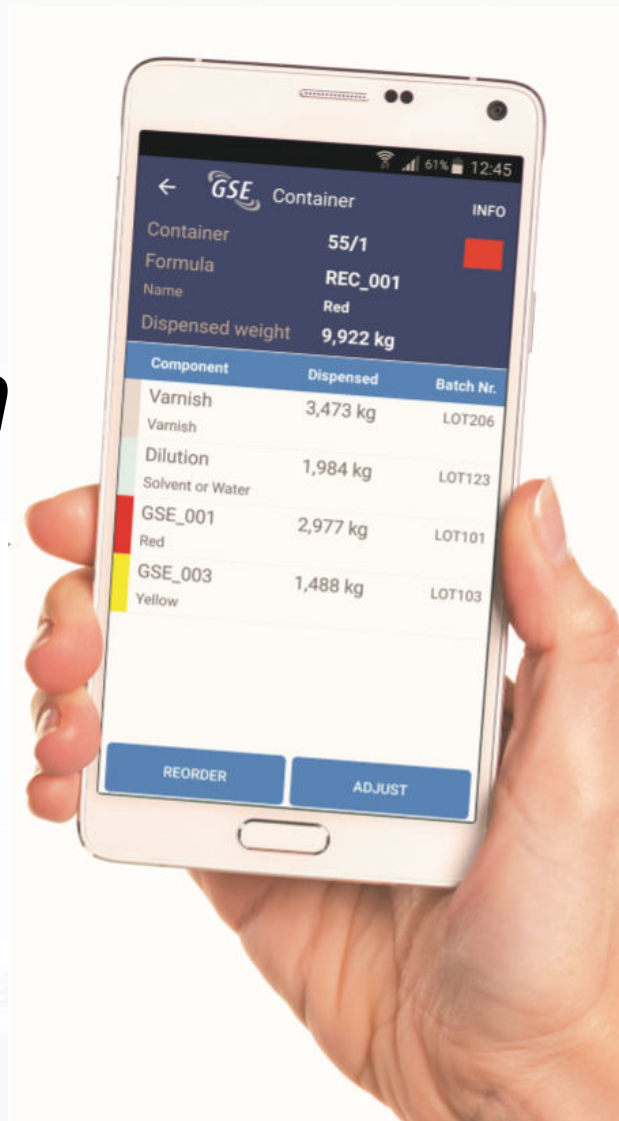
Thank you for your attention

For more information and
demonstrations:

Hall A, Booth 558

www.gsedispensing.com

www.printproofsolutions.com



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