

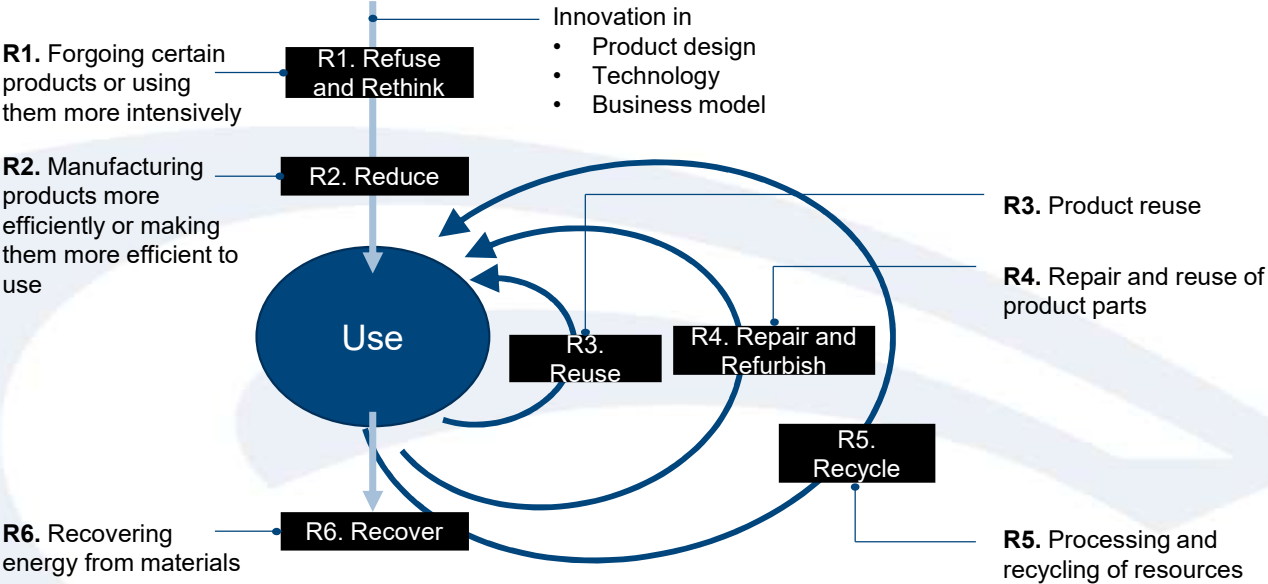


**Rethink your ink logistics to
reduce environmental impact**

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September 22, 2022**

From theory to practice

R-ladder of circularity strategies (Source: PBL)



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 45 years experience in graphics, textiles and coating
- Headquarters in the Netherlands, with local presence in USA, Spain, Brazil and Czech Republic
- Global network of sales agents and service representatives
- > 2.100 installations, world-wide

Lean and smart ink logistics

that saves up to 30% of your costs

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



1
Overproduction



2
Transport



3
Defects



4
Inventory



5
Motion



6
Overprocessing

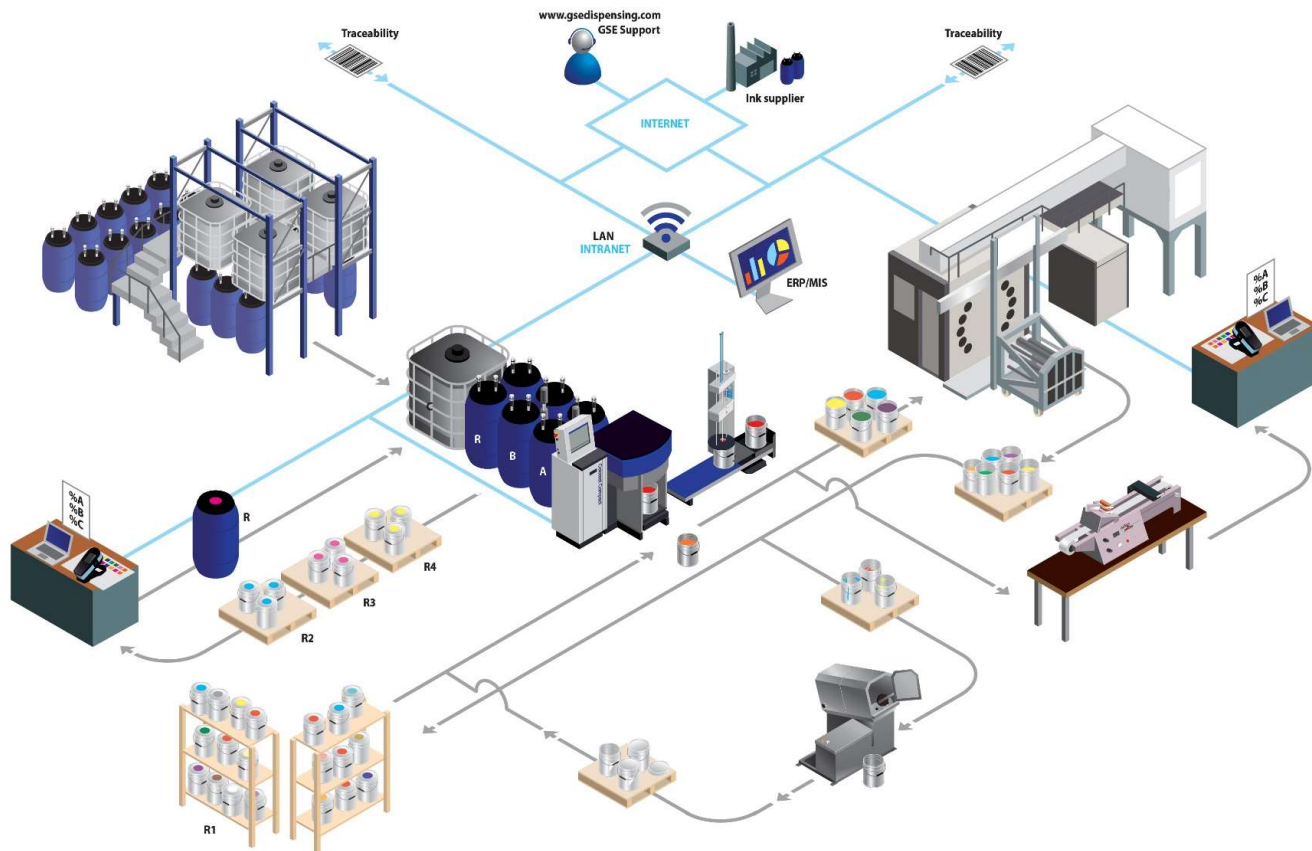


7
Waiting

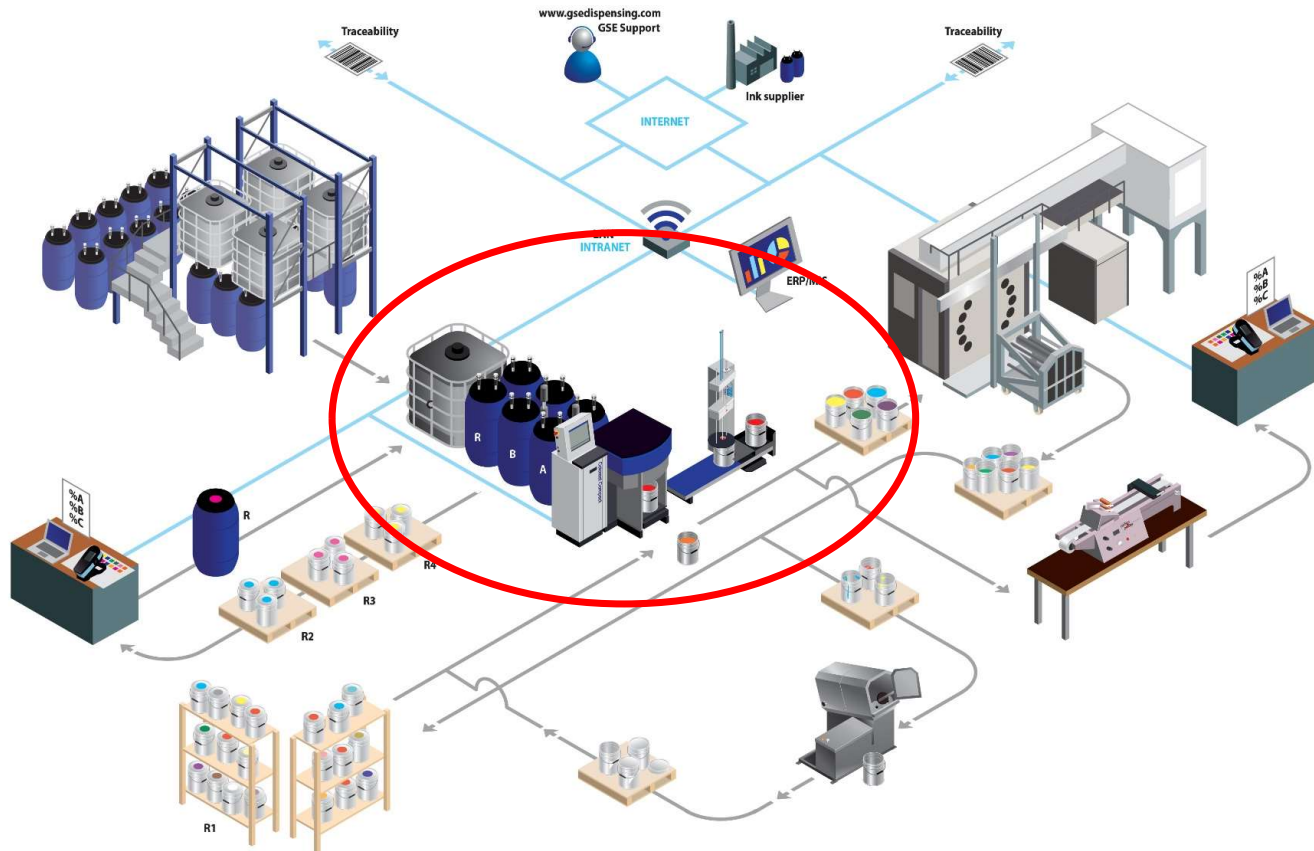


8
Talent

Rethinking your ink logistics: reduce, reuse, recycle



Reduce fresh inks

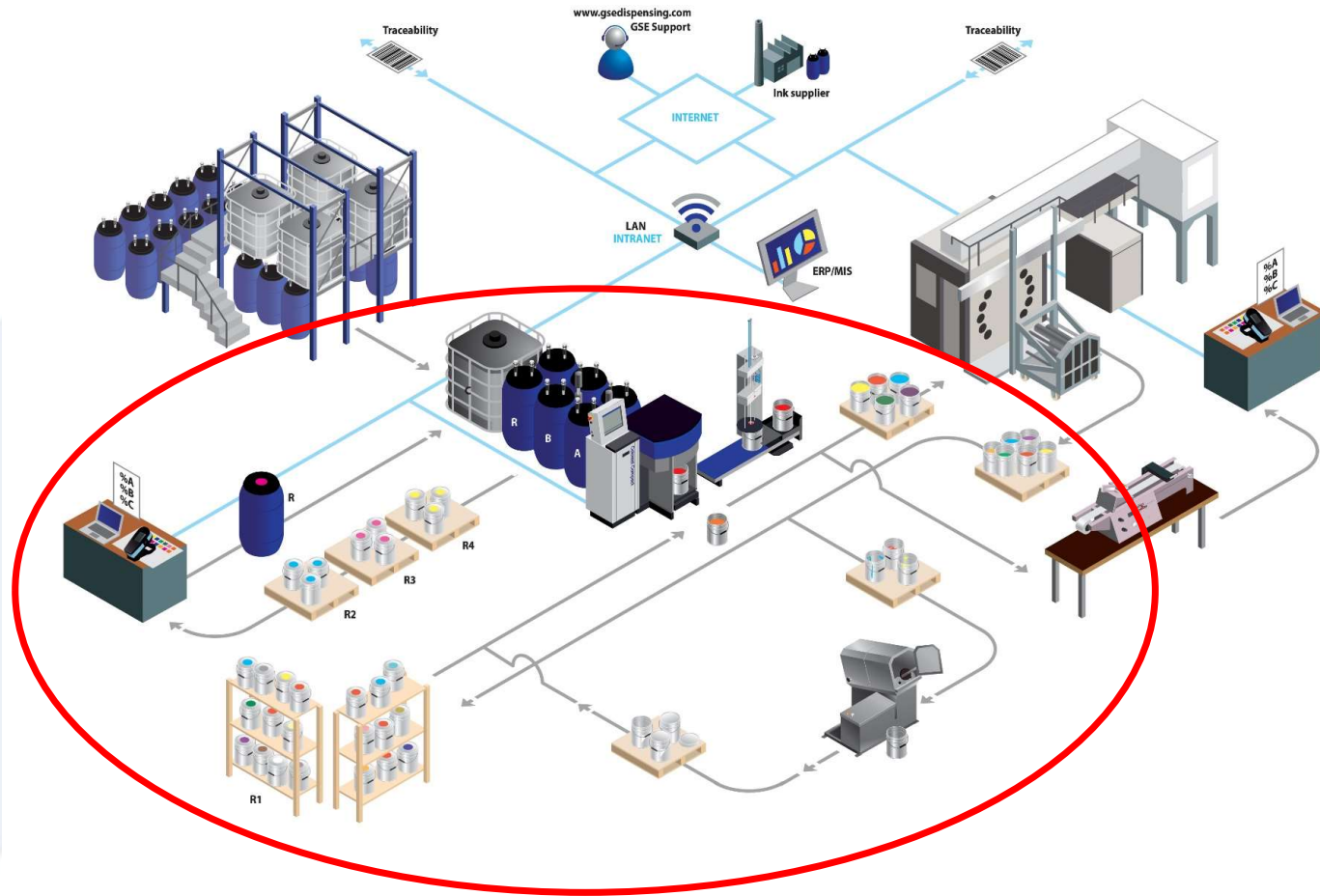


Reduce fresh inks

- Dispense spot colours made from base components automatically
- JIT 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

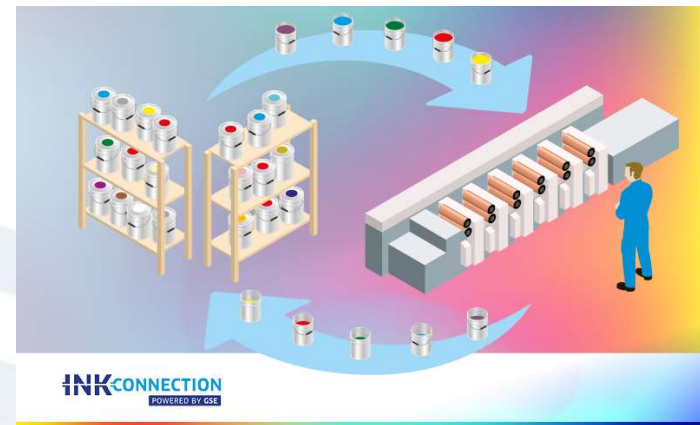


Reuse and recycle press return inks



Reuse and recycle press return inks by individual containers

- Option A (same colour):
REUSE - directly book out a return (no added ingredients)
- Option B (different colour):
RECYCLE - choose returns for mixing with other ingredients



Usable returns for 20 kg “soda orange”: software screenshot

GSE Ink manager [English] : EN

Group by: None

Search Close

No.	Order	Formula	Name	Required weight	Pre-fill	Scheduled	Container	Job	Additive / Anilox	Reser ved	Container	Index	Status	Article	Customer	Press
1		SODA ORANGE		20.0000	0.0000		20kg	Normal	0%		93	1	Waiting			
2	ORD20190327-1	REC_001	Red	19.7500	0.0000	27-07-2021 09:04:11	20kg	Normal	0%		71	1	Waiting	ART_001	CUS_001	MACH_001
3	ORD20190327													ART_001	CUS_001	MACH_001
4	ORD20190327													ART_001	CUS_001	MACH_001
5	ORD20190327													ART_001	CUS_001	MACH_001

Usable returns

Container: 93, Index: 1, Container group: 20.0000 kg, Container required: 20.0000 kg, Remaining: 13.0000 kg, Selected: 7.0000 kg

Formula: SODA ORANGE, Name:

Position	Position index	Code	Name	Re-use weight	Stock weight	Expiry	Reserved	Last used	Dilute	Substitutes
Position-002	2	SODA ORANGE		7.0000	7.0000	23-12-2021		23-11-2021	0.00	
PVB-007	1	REC_006	Mix (for REC_001, 007)	8.2490	8.2490	23-12-2021		17-04-2021	0.00	
PVB-007	3	REC_006	Mix (for REC_001, 007)	8.2340	8.2340	28-09-2021		18-04-2021	0.00	
Position-002	1	COLA RED		6.5000	7.0000	23-12-2021		23-11-2021	0.00	
PVB-007	2	REC_006	Mix (for REC_001, 007)	5.9100	5.9100	28-09-2021		26-07-2021	0.00	
PVB-004	1	BULK	Christmas Red	3.2500	5.5890	23-12-2021		23-11-2021	0.00	

Not Is null or empty([Code])

F7 (Recycle icon), F8 (Green checkmark), Esc (Red X)

0.0000 20kg

100%

Machine: CC34-WB | Line: CC34-WB | RTC initialized | Circulation is running: System no=4, Time=60 | Stop

Recycling calculation example for 20 kg “soda orange”

	SODA ORANGE: 20kg ink required		COLA RED: 7kg return ink recycled		TO BE ADDED: 13kg fresh inks
		(A)		(B)	(A-B)
Ingredient	%	kg	%	kg	kg
Varnish	45%	9.00	45%	3.15	5.85
Red	25%	5.00	50%	3.50	1.50
Yellow	25%	5.00	0%	-	5.00
White	5%	1.00	5%	0.35	0.65

Recycle press return inks by collecting returns into „clusters“

1. Select return ink containers and create the cluster
2. Sampling – to get the cluster formula(s)
3. Connect to the dispenser
4. Automatically use the cluster in new jobs



Ink is just the tip of the iceberg..



Making the switch from solvent to water

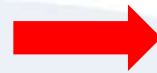
- No need to install explosion-proofing or grounding against electrostatic discharge – driving down expenditure for those who make the switch
- No solvent vapour extraction and recovery needed



How can GSE help to make the switch?

- Dispensers can be extended with extra base colour barrels to manage solvent and water-based ink series simultaneously
- 'Lean and smart' approach to adopting new ink series:

look at your current state



design and implement your future state/processes



Thank you for your attention!



www.gsedispensing.com
www.inkconnection.org