

Supplementary Material

for

Proposal to change the Layout in a Job Shop Environment in a Beverage Filling Machinery Industry

Jéssica Rubbo and Ivandro Cecconelo*

Universidade de Caxias do Sul, Pós-Graduação em Engenharia Industrial, Área do Conhecimento de Ciências Exatas e Engenharias,
Rua Francisco Getúlio Vargas 1130, Caxias do Sul, 95070-560, Brazil.

*Corresponding author: iceccone@ucs.br

Table of contents

1. Figure S1. Current Layout	S2
2. Figure S2. Current state value stream mapping	S3
3. Figure S3. Critical path of packages – PERT	S4
4. Figure S4. Current layout simulation	S4
5. Figure S5. Proposed layout	S5
6. Figure S6. Future state simulation	S6



This Supplementary Material is an open access data associated to the publication Rubbo J., Cecconello I. *Sci. cum Ind.* 2025, 14(1), e251402 (<https://doi.org/10.18226/23185279.e251402>), and distributed under the terms of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

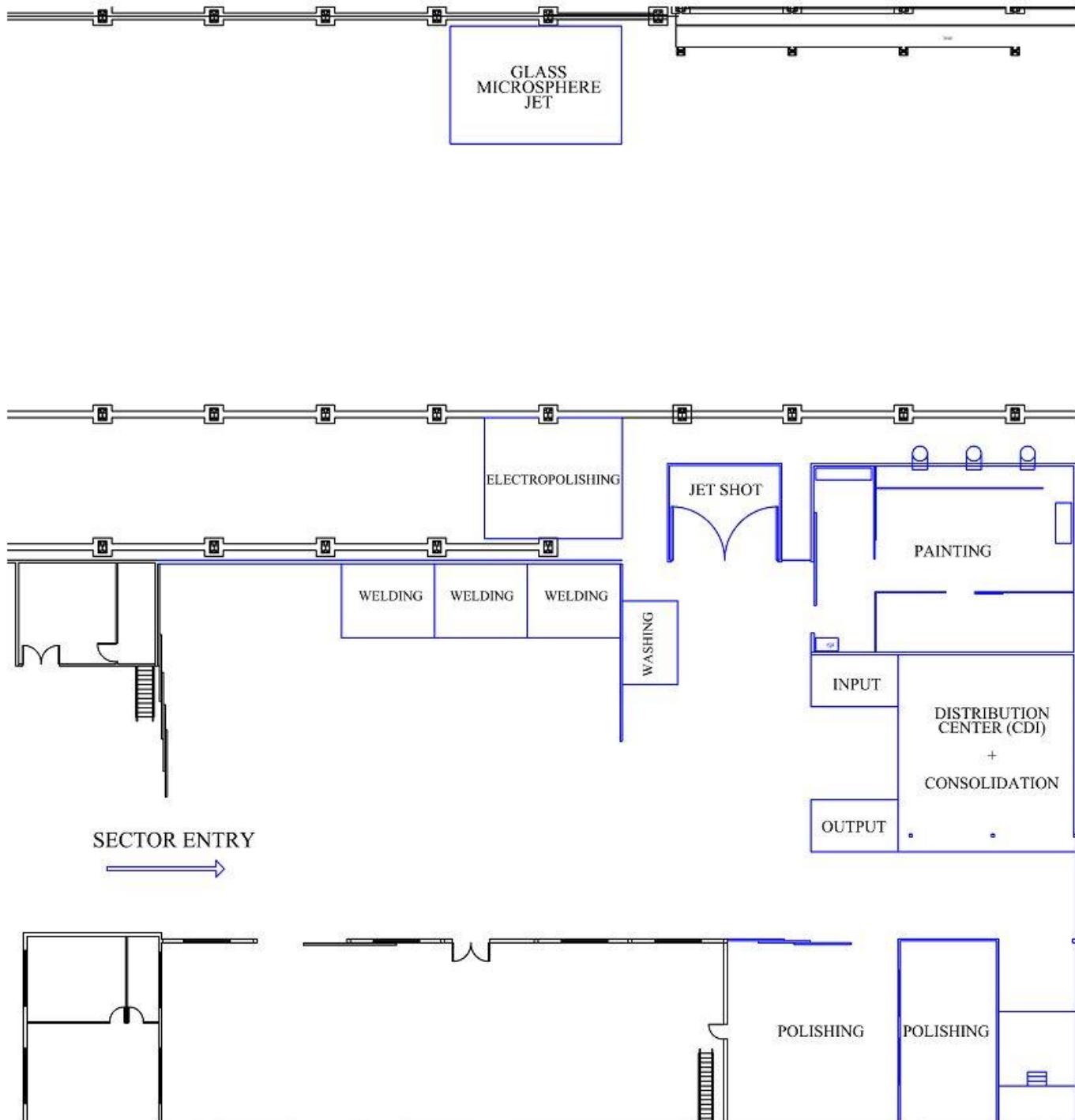


Figure S1. Current layout.



This Supplementary Material is an open access data associated to the publication Rubbo J., Cecconello I. *Sci. cum Ind.* 2025, 14(1), e251402 (<https://doi.org/10.18226/23185279.e251402>), and distributed under the terms of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

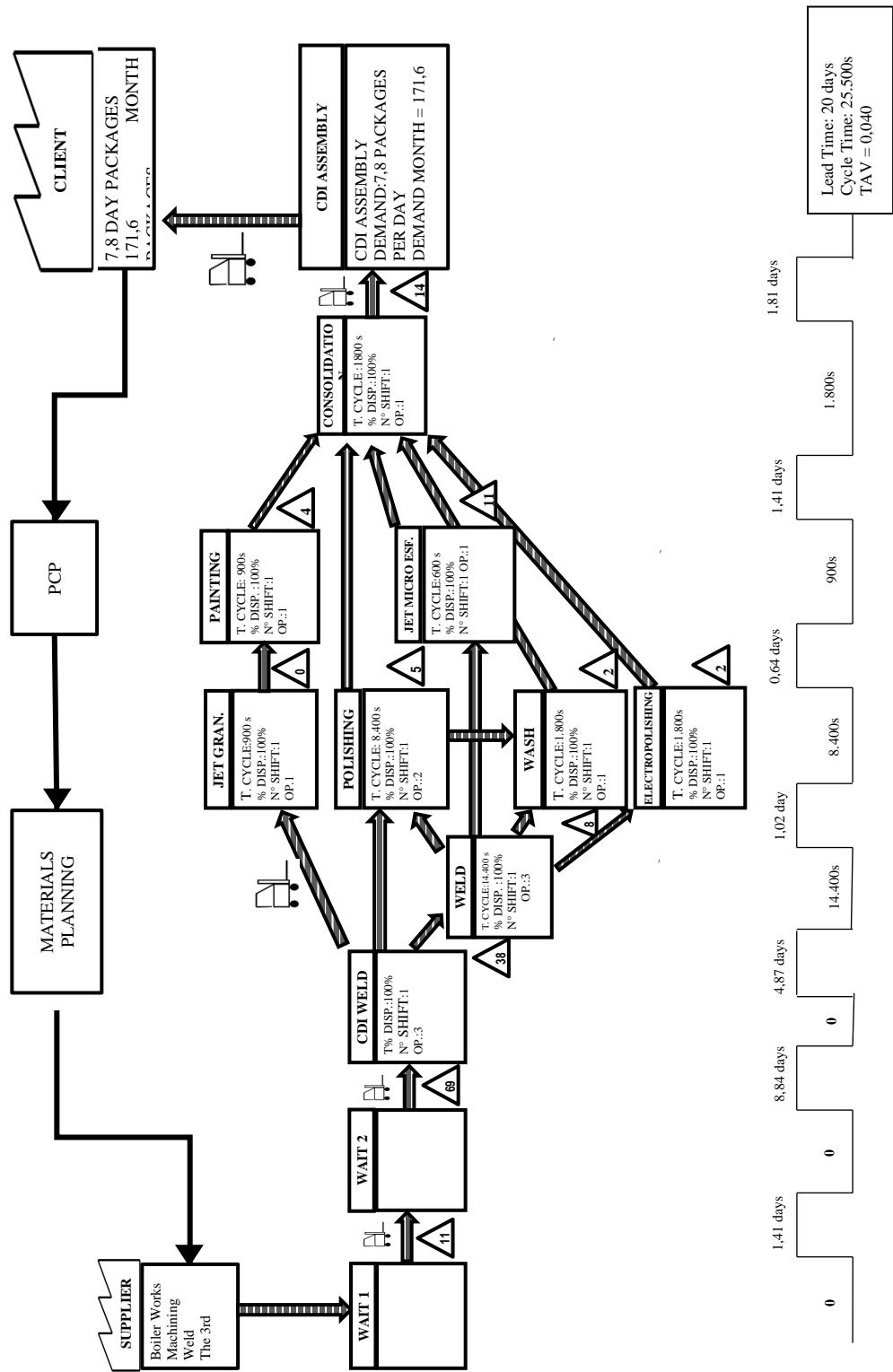
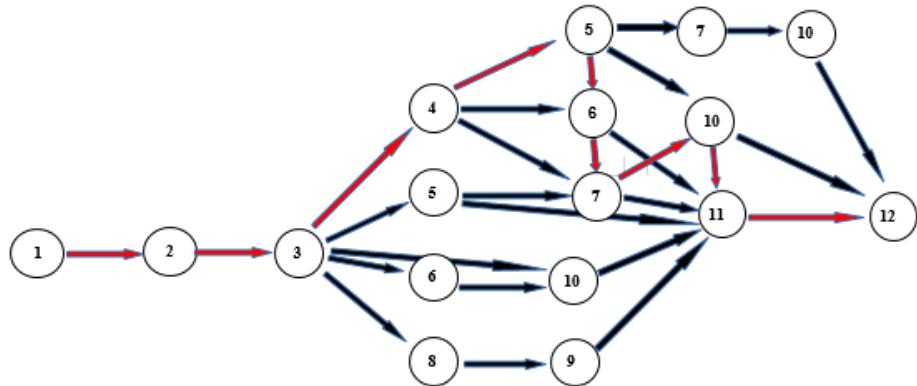


Figure S2. Current state value stream mapping.



This Supplementary Material is an open access data associated to the publication Rubbo J., Cecconello I. *Sci. cum Ind.* 2025, 14(1), e251402 (<https://doi.org/10.18226/23185279.e251402>), and distributed under the terms of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).



CT's	Critical Path	Distance	Days
01 Prohibites	Prohibited	33	1
02 Wait	1 -> 2	8	10
03 CDI Weld	2 -> 3	13	1
04 Weld	3 -> 4	25	1
05 Polishing	4 -> 5	20	1
06 Electropolishing	5 -> 6	20	1
07 Wash	6 -> 7	5	1
08 Grit	7 -> 10	175	2
09 Painting	10 -> 11	200	1
10 Glass Microsphere Jet	11 -> 12	33	1
11 CDI Consolidation	Total	532 meters	20 days
12 CDI Assembly			

Figure S3. Critical path of packages – PERT.

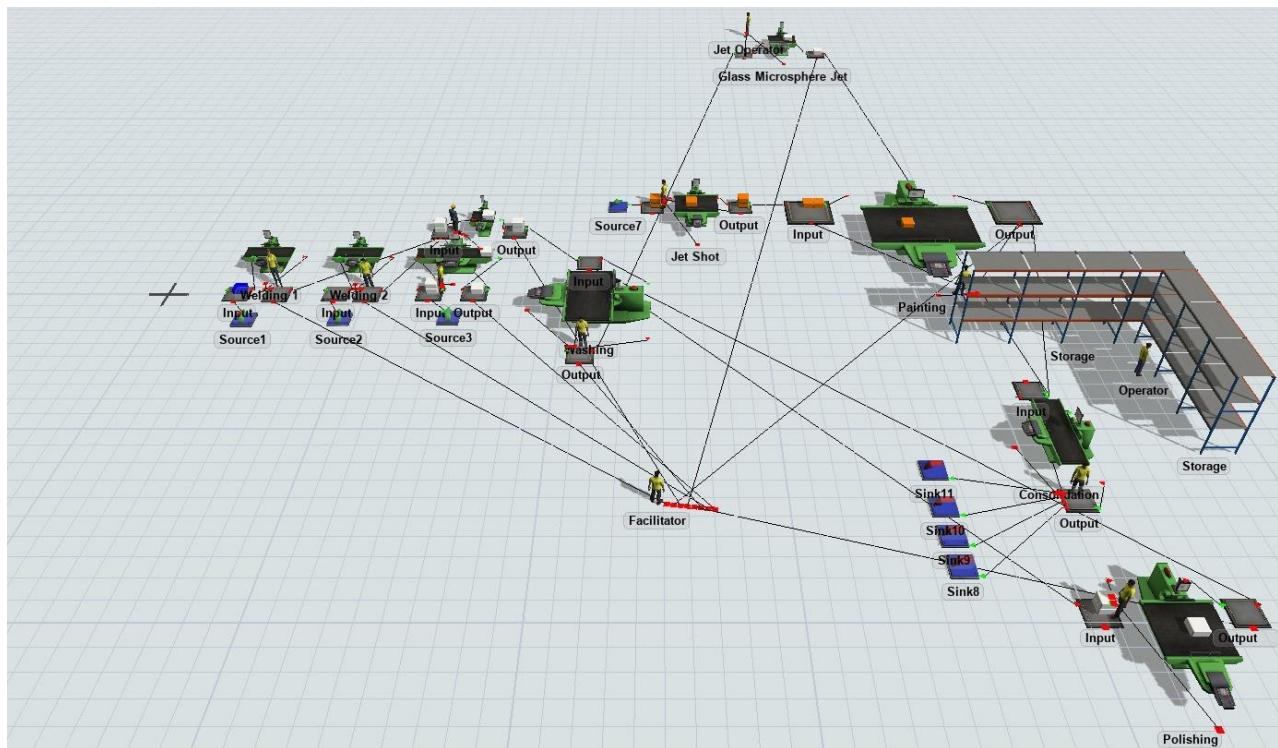


Figure S4. Current layout simulation.



This Supplementary Material is an open access data associated to the publication Rubbo J., Cecconello I. *Sci. cum Ind.* 2025, 14(1), e251402 (<https://doi.org/10.18226/23185279.e251402>), and distributed under the terms of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).



Figure S5. Proposed layout.



This Supplementary Material is an open access data associated to the publication Rubbo J., Cecconello I. *Sci. cum Ind.* 2025, 14(1), e251402 (<https://doi.org/10.18226/23185279.e251402>), and distributed under the terms of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).

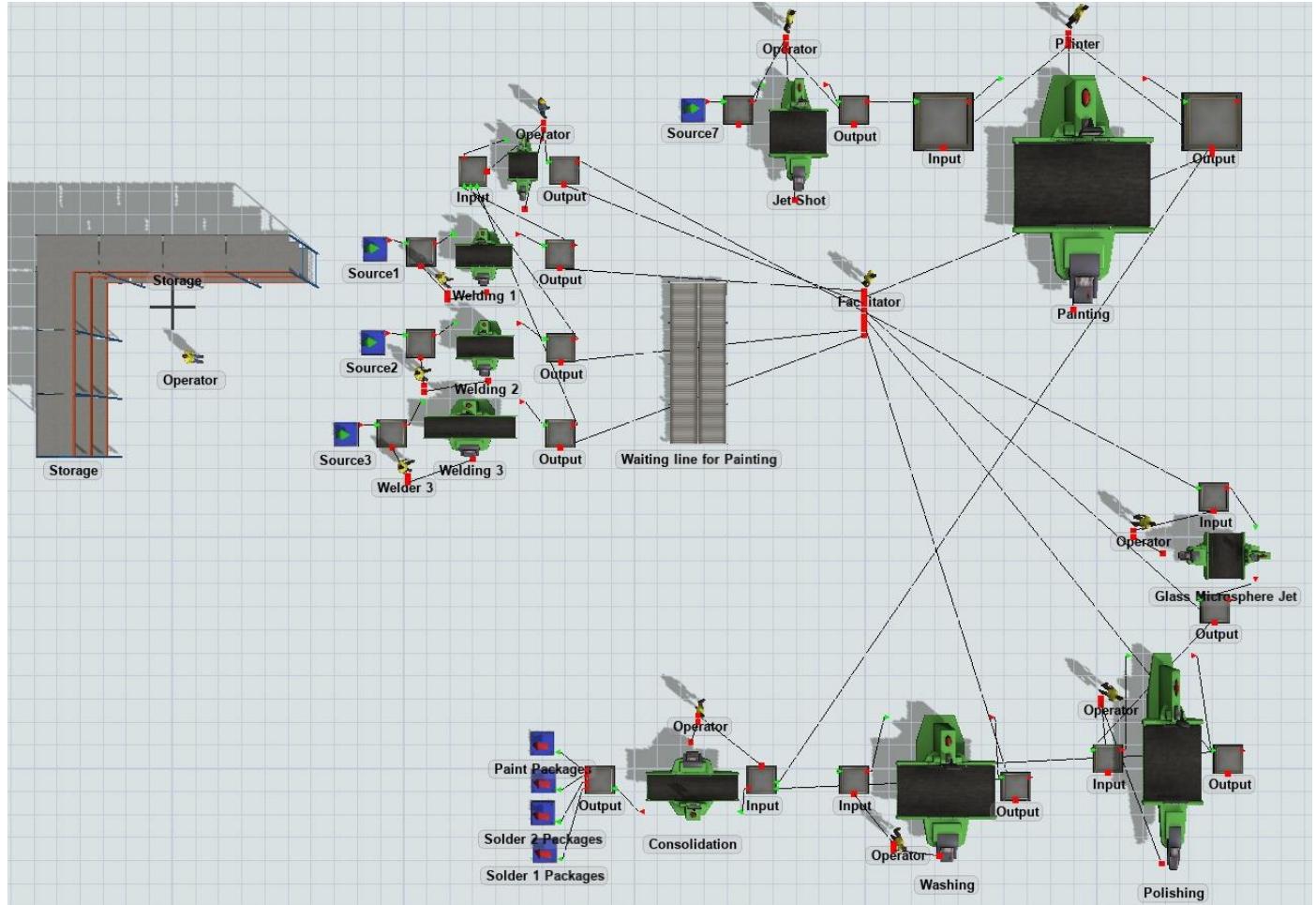


Figure S6. Future state simulation.



This Supplementary Material is an open access data associated to the publication Rubbo J., Cecconello I. *Sci. cum Ind.* 2025, 14(1), e251402 (<https://doi.org/10.18226/23185279.e251402>), and distributed under the terms of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).