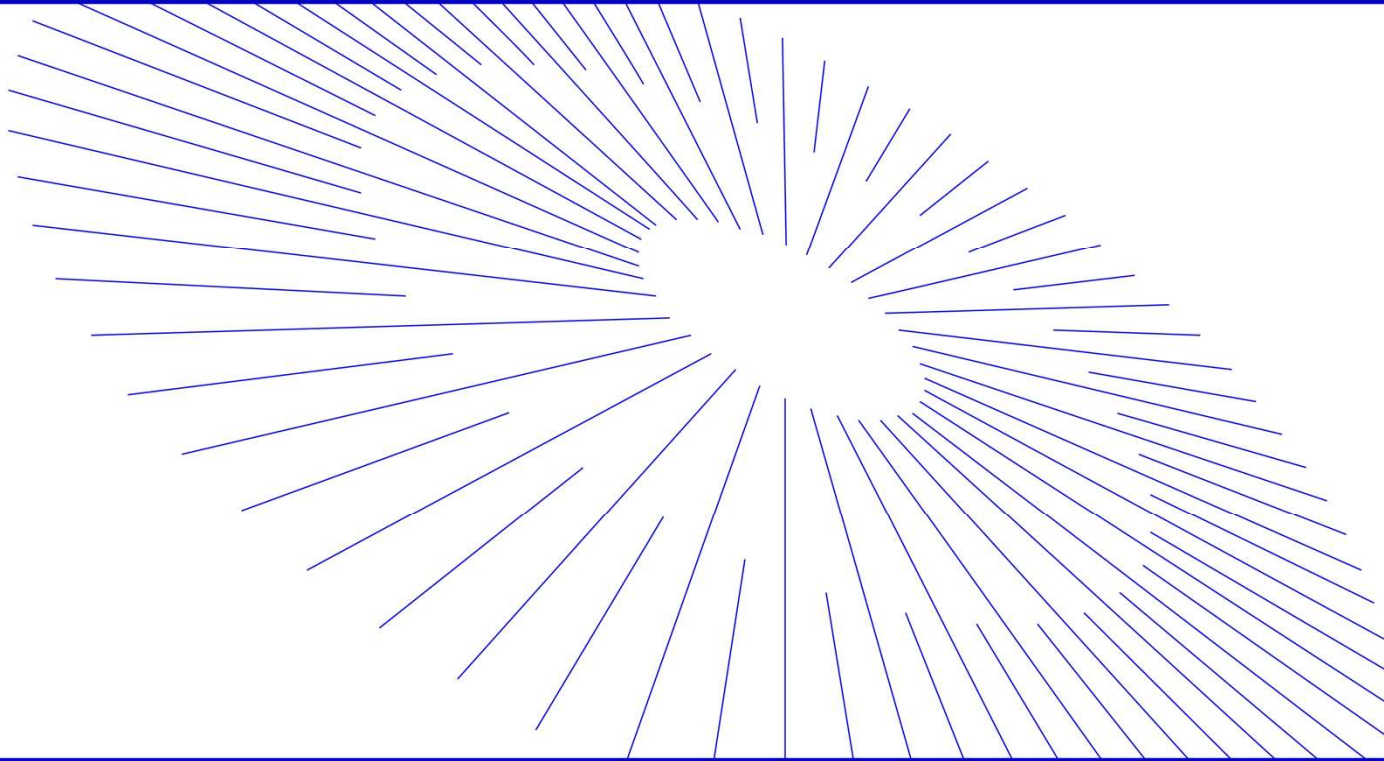


# Smart Construction Simulation

## 2025.7.22(Schedule) About the Release Version

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- We are pleased to announce the release of updates to "Smart Construction Simulation" with the following schedule and content.
- Due to system maintenance, the relevant services will not be available during the following dates.  
(\*The release schedule, time, and contents are subject to change depending on the situation. Please understand this in advance.)

Schedule : Tuesday, July 23 (Japan time) 7:00 p.m. - 12:00 p.m.

NO.	Target Functions	Overview	Details
1	Simulation (Function Improvement)	Addition of automatic area division function using line work	A function has been added to automatically divide an area using linework. Lines to be used for division can be selected from the linework displayed on the screen by clicking, and the selected lines will be highlighted and reflected as the division target.
2	Simulation (Function Improvement)	Specification change of on-site image generation for construction equipment Simulation linkage	The site image sent when linking with Construction Equipment Simulation has been improved so that the image is always generated at a position and zoom that includes the entire site. This eliminates the problem of missing parts of the image that prevent the entire site from being shared.
3	Machine Simulation (Function Improvement)	Support for out of scope of Google Translate	All pages are now exempt from Google Translate. This prevents display corruption and malfunctions caused by automatic translation. If you need to switch languages, please use the language switch menu in the header section.





NO.	Target Functions	Overview	Details
4	Machine Simulation (Function Improvement)	Implementation of logic to unify the number of dump laps	The control logic has been improved to allow multiple dumpsters used on site to make the same number of laps per day. A “Loading End Time” condition setting option has been added to the confirmation dialog before calculation execution and can be toggled for each calculation. The stop timing of all vehicles is adjusted based on the arrival timing of the first and last dump trucks. Note that the system does not support cases in which the dump trucks are thrown in at a late interval, causing a “lap delay” in which the first dump truck makes one lap.
5	Machine Simulation (Function Improvement)	Added the ability to link Simulation Runway and Fleet location information.	Added the ability to manually link Simulation runways to Fleet location information. The “Fleet linkage” button allows you to edit the linkage information and set the loading and unloading points. If the points are shared, the set points are automatically reflected on the shared runway. In addition, for a runway that includes a temporary storage area, the bringer side must set the temporary storage area as the unloading point and the take-out side as the loading point.
6	Machine Simulation (Function Improvement)	Added automatic updating function of tying information when creating a runway using fleet information.	When creating a runway using fleet information, a new function has been added to automatically update loading/unloading points and route linkage information. This eliminates the need for manual registration on the Simulation side and is reflected when adding a new runway.
7	Machine Simulation (Function Improvement)	Changed Fleet stringing process on the daily utilization screen.	The system has been modified to utilize the tie-in information between Simulation's runways and Fleet's loading points to tie in the construction equipment results on the Daily Availability screen. If the tie-in information exists, it is given priority; otherwise, latitude/longitude and other information is used in the existing automatic logic.





NO.	Target Functions	Overview	Details
8	Machine Simulation (Function Improvement)	Fleet performance graphs for each loading and unloading area	A new function has been added to reflect Fleet's performance data not only in the overall transported volume, but also in the progress graphs for each loading and unloading area. By utilizing the tied-in information, daily transported soil volume for each location can be accurately totaled and visualized, enabling more detailed forecasting and actual management. Note that the progress graphs for each loading station and unloading station do not show a market graph.



NO.	Target Functions	Overview
1	Simulation (Function Improvement)	<ul style="list-style-type: none"><li>• Overview : Addition of automatic area division function using line work</li><li>• Details : A function has been added to automatically divide an area using linework. Lines to be used for division can be selected from the linework displayed on the screen by clicking, and the selected lines will be highlighted and reflected as the division target.</li></ul> <div data-bbox="575 753 1216 1128"><p>マージ 分割</p><p>盛土 A 4,486.20 m³</p><p>分割 (線) 分割 (多角形) 分割 (ラインワーク)</p></div> <div data-bbox="1216 697 2163 1184"><p>プロジェクト : VAL_Mihama20250718</p><p>× エリアを分割する</p><p>地上のラインワークをクリックしてエリアを分割する線を選択する</p><p>エリア 盛土 A</p><p>分割 キャンセル</p><p>Select a line in the linework and specify the area to be divided ラインワークの線を選択し、分割するエリアを指定</p></div>



NO.	Target Functions	Overview
2	Simulation (Function Improvement)	<ul style="list-style-type: none"><li>• Overview : Specification change of on-site image generation for construction equipment Simulation linkage</li><li>• Details : The site image sent when linking with Construction Equipment Simulation has been improved so that the image is always generated at a position and zoom that includes the entire site. This eliminates the problem of missing parts of the image that prevent the entire site from being shared.</li></ul> <div></div> <div><p><b>Before</b></p><p>Part of the site will be missing. 現場の一部が欠けてしまう</p><p><b>After</b></p><p>The entire field is coordinated. 現場全体が連携される</p></div>





NO.	Target Functions	Overview
3	Machine Simulation (Function Improvement)	<ul style="list-style-type: none"><li>• Overview : Support for out of scope of Google Translate</li><li>• Details : All pages are now exempt from Google Translate. This prevents display corruption and malfunctions caused by automatic translation. If you need to switch languages, please use the language switch menu in the header section.</li></ul>  <p>The screenshot shows the Smart Construction website interface. A red box highlights the language switch menu in the top right corner, which includes buttons for '英語' (English) and '日本語' (Japanese), along with a 'Google Translate' button. A blue callout box points to the 'Google Translate' button with the text: 'Google Translate will no longer automatically translate the entire page. Google翻訳によりページ全体が自動翻訳されなくなる'.</p>



NO.	Target Functions	Overview										
4	Machine Simulation (Function Improvement) [1/2]	<div><div><div><div><div>• Overview : Implementation of logic to unify the number of dump laps</div><div>• Details : The control logic has been improved to allow multiple dumpsters used on site to make the same number of laps per day. A “Loading End Time” condition setting option has been added to the confirmation dialog before calculation execution and can be toggled for each calculation. The stop timing of all vehicles is adjusted based on the arrival timing of the first and last dump trucks.Note that the system does not support cases in which the dump trucks are thrown in at a late interval, causing a “lap delay” in which the first dump truck makes one lap.</div></div></div><div><div><div>選択機械の作業能力の確認</div><div><div>以下の作業能力をもとに計算しますが、計算を実行してよろしいですか？ 問題がある場合は、基礎データの値を編集してから計算を実行してください。</div><div><div>積込場</div><div>切土 4 → 盛土 A</div></div><div><div>地山, 積み待ち土 / 砂</div><div><table><tr><td>工区作業効率</td><td>1.00</td></tr><tr><td>対象土密度(t/m3)</td><td>1.80</td></tr><tr><td>バケット係数</td><td>0.85</td></tr><tr><td>掘削難易度係数</td><td>1.00</td></tr><tr><td>土量換算率L</td><td>1.15</td></tr></table></div></div><div><div>▼ 詳細設定</div><div><div>積込終了時間の設定:</div><div><div><div><input checked="" type="checkbox"/> 終了時間まで可能な限り作業する</div><div><input type="checkbox"/> 周回数を揃えるため終了時間を調整する</div></div><div>積込 (入れ違い) 時、同時に積込できる条件:</div><div><div><input checked="" type="checkbox"/> 積込ダンプの狭路進入を優先</div><div><input type="checkbox"/> 狭路の進入優先なし</div></div><div>仮置場の積込建機の作業開始条件:</div><div><div><input checked="" type="checkbox"/> ダンプ積込量以上の土があれば積込開始</div><div><input type="checkbox"/> バケット容量以上の土があれば積込開始</div></div></div><div>計算実行</div></div></div><div><div>Additional option: “Set the loading end time” 追加オプション: 「積込終了時間の設定」</div></div></div></div></div></div></div>	工区作業効率	1.00	対象土密度(t/m3)	1.80	バケット係数	0.85	掘削難易度係数	1.00	土量換算率L	1.15
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4	Machine Simulation (Function Improvement) [2/2]	<div><div>Work until end time 終了時間まで可能な限り作業する</div><table><tr><th></th><th></th><th>08:00</th><th>10:00</th><th>12:00</th><th>14:00</th><th>16:00</th><th>稼働率</th><th>土量</th><th>周回数</th></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td></td><td></td><td>26 %</td><td>77 m<sup>3</sup></td><td>4</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td></td><td></td><td>26 %</td><td>77 m<sup>3</sup></td><td>4</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td></td><td></td><td>24 %</td><td>71 m<sup>3</sup></td><td>4</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td></td><td></td><td>19 %</td><td>58 m<sup>3</sup></td><td>3</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td></td><td></td><td>20 %</td><td>58 m<sup>3</sup></td><td>3</td></tr></table><div>The number of lapses is not aligned because it operates until the end of the day 終了時間まで稼働するため、周回数が揃わない</div></div> <div><div>Adjust end time to balance cycles 周回数を揃えるため終了時間を調整する</div><table><tr><th></th><th></th><th>12:00</th><th>14:00</th><th>16:00</th><th>稼働率</th><th>土量</th><th>周回数</th></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td>20 %</td><td>58 m<sup>3</sup></td><td>3</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td>20 %</td><td>58 m<sup>3</sup></td><td>3</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td>20 %</td><td>58 m<sup>3</sup></td><td>3</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td>19 %</td><td>58 m<sup>3</sup></td><td>3</td></tr><tr><td>=</td><td> Load capacity: 40t</td><td></td><td></td><td></td><td>20 %</td><td>58 m<sup>3</sup></td><td>3</td></tr></table><div>To adjust the end time, the number of laps will be aligned 終了時間を調整するため、周回数が揃う</div></div>			08:00	10:00	12:00	14:00	16:00	稼働率	土量	周回数	=	Load capacity: 40t						26 %	77 m <sup>3</sup>	4	=	Load capacity: 40t						26 %	77 m <sup>3</sup>	4	=	Load capacity: 40t						24 %	71 m <sup>3</sup>	4	=	Load capacity: 40t						19 %	58 m <sup>3</sup>	3	=	Load capacity: 40t						20 %	58 m <sup>3</sup>	3			12:00	14:00	16:00	稼働率	土量	周回数	=	Load capacity: 40t				20 %	58 m <sup>3</sup>	3	=	Load capacity: 40t				20 %	58 m <sup>3</sup>	3	=	Load capacity: 40t				20 %	58 m <sup>3</sup>	3	=	Load capacity: 40t				19 %	58 m <sup>3</sup>	3	=	Load capacity: 40t				20 %	58 m <sup>3</sup>	3
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走路3	積込地点2	安八SIC残土置場	なし																			



NO.	Target Functions	Overview												
6	Machine Simulation (Function Improvement) [1/2]	<div><div><div><div>• Overview : Added automatic updating function of tying information when creating a runway using fleet information.</div><div>• Details : When creating a runway using fleet information, a new function has been added to automatically update loading/unloading points and route linkage information. This eliminates the need for manual registration on the Simulation side and is reflected when adding a new runway.</div></div></div><div><div><div><div><div>Fleetから走路連携</div><div>紐づけ情報の登録</div><div><div>Smart Construction Fleet</div></div></div><div><div>走路の追加</div><div>Fleetで作成されたルートの始点を積込地点、終点を荷降地点として紐づけ、走路を作成します。 ルートが設定されていない場合は、積込地点と荷降地点を直線で結んだ走路を自動作成します。</div><div><div>積込地点</div><div>荷降地点</div><div>ルート</div><div><div>* 積込地点1</div><div>* 荷降地点1</div><div>ルート1</div></div></div></div></div><div><div>SimulationとFleet情報の紐づけ</div><div>Simulationの走路とFleetの作業地点の紐づけ登録を行う機能です。</div><table><tr><th>Simulation</th><th colspan="3">Fleet</th></tr><tr><th>走路</th><th>積込地点*</th><th>荷降地点*</th><th>ルート</th></tr><tr><td>走路1</td><td>積込地点1</td><td>荷降地点1</td><td>ルート1</td></tr></table><div>保存</div></div></div><div>Fleet information is automatically linked when creating a runway using “Fleet to Runway Linkage”. 「Fleetから走路連携」による走路作成時にFleet情報が自動で紐づけされる</div></div></div>	Simulation	Fleet			走路	積込地点*	荷降地点*	ルート	走路1	積込地点1	荷降地点1	ルート1
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走路1	積込地点1	荷降地点1	ルート1											



NO.

Target Functions

Overview

6

Machine  
Simulation  
(Function  
Improvement)  
[2/2]

When a point that has already been linked to another runway is specified when linking a runway from Fleet  
Fleetから走路連携時にすでに他走路と紐づけ済みの地点を指定した場合

走路の追加

Fleetで作成されたルートの始点を積込地点、終点を荷降地点として紐づけ、走路を作成します。  
ルートが設定されていない場合は、積込地点と荷降地点を直線で結んだ走路を自動作成します。

積込地点 \* 積込地点1

荷降地点 \* 荷降地点1

ルート

次へ



走路の追加

走路名称 \* 走路2

総搬送土量 \* 1,000 m3

日当たり  
上限土量 9,999 m3

開始条件 指定日

開始日 2024/05/23 (木)

作業開始 時 分 08 : 00

積込終了 17 : 00

休憩時間 12 : 00 ~ 13 : 00

戻る 次へ

Specify a location that has already been tied to another runway  
他走路で紐づけ済みの地点を指定

Only "specified date" can be selected as the start condition.  
開始条件は「指定日」のみ選択可能

SimulationとFleet情報の紐づけ

Simulationの走路とFleetの作業地点の紐づけ登録を行う機能です。

Simulation	Fleet		ルート
走路	積込地点*	荷降地点*	
走路1	積込地点1	荷降地点1	ルート1

保存

**【Notes】**

Existing identical points are shared when creating a runway, and the number of construction machines at the shared point is also combined.  
走路作成時に既存の同一点を共有し、共有地点の建機台数も合算される



NO.	Target Functions	Overview																																							
7	Machine Simulation (Function Improvement)	<div><div><div><div><div>SimulationとFleet情報の紐づけ</div><div>Simulationの走路とFleetの作業地点の紐づけ登録を行う機能です。</div><table><thead><tr><th>Simulation</th><th>Fleet</th><th></th></tr></thead><tbody><tr><td>走路</td><td>積込地点*</td><td>荷降地点*</td></tr><tr><td>走路1</td><td>忠節河川敷</td><td>安八SIC残土置場</td></tr></tbody></table></div><div>If there is no tying information 紐づけ情報が無い場合</div></div><div><div>Tie in dump/excavator results in the daily utilization rate screen with conventional automatic logic (latitude and longitude). 従来の自動ロジック(緯度経度)で日別稼働率画面のダンプ/ショベルの実績を紐づける</div></div></div><div><div>Based on the information linking the runway to the loading/unloading point, link the dump/excavator results on the daily utilization screen. 走路と積込地点/荷降地点の紐づけ情報をもとに、日別稼働率画面でダンプ/ショベルの実績を紐づける</div><div>&lt;Notes&gt; The target of the linking process is the first loading and unloading point of each day of the Fleet history. 紐付け処理の対象は、Fleet実績のそれぞれの日の最初の積込・荷下履歴の地点で紐づけられる</div></div><div><table><thead><tr><th></th><th></th><th>稼働率</th><th>土量</th><th>周回数</th></tr></thead><tbody><tr><td>運行管理用</td><td>ダンプ_2</td><td>38 %</td><td>22 m3</td><td>4</td></tr><tr><td>積込機(PC200i)</td><td></td><td>55 %</td><td>55 m3</td><td></td></tr><tr><td>運行管理用</td><td>ダンプ_3</td><td>35 %</td><td>11 m3</td><td>2</td></tr><tr><td>運行管理用</td><td>ダンプ_4</td><td>34 %</td><td>11 m3</td><td>2</td></tr><tr><td>運行管理用</td><td>ダンプ_1</td><td>34 %</td><td>11 m3</td><td>2</td></tr></tbody></table></div></div>	Simulation	Fleet		走路	積込地点*	荷降地点*	走路1	忠節河川敷	安八SIC残土置場			稼働率	土量	周回数	運行管理用	ダンプ_2	38 %	22 m3	4	積込機(PC200i)		55 %	55 m3		運行管理用	ダンプ_3	35 %	11 m3	2	運行管理用	ダンプ_4	34 %	11 m3	2	運行管理用	ダンプ_1	34 %	11 m3	2
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運行管理用	ダンプ_1	34 %	11 m3	2																																					



NO.	Target Functions	Overview
8	Machine Simulation (Function Improvement) [1/3]	<ul style="list-style-type: none"><li>Overview : Fleet performance graphs for each loading and unloading area</li><li>Details : A new function has been added to reflect Fleet's performance data not only in the overall transported volume, but also in the progress graphs for each loading and unloading area. By utilizing the tied-in information, daily transported soil volume for each location can be accurately totaled and visualized, enabling more detailed forecasting and actual management. Note that the progress graphs for each loading station and unloading station do not show a market graph.</li></ul>  <p>Progress graphs for each loading station/unloading station based on the information associated with the linkage. 紐づけ情報をもとに、各積込場/荷降場ごとに進捗グラフへ反映 ※ If the linkage information is not registered, it is not reflected in the progress graph. 紐づけ情報が未登録の場合、進捗グラフへ反映されない</p>





NO.	Target Functions	Overview															
8	Machine Simulation (Function Improvement) [2/3]	<div>Reflection on the progress graph when sharing locations 地点共有時の進捗グラフへの反映</div> <div><p>SimulationとFleet情報の紐づけ</p><p>Simulationの走路情報とFleetの走路および作業地点を紐づけを行います ルート情報の紐づけは必須ではありません。</p><table><thead><tr><th>Simulation</th><th>Fleet</th><th></th></tr></thead><tbody><tr><td>走路</td><td>積込地点*</td><td>荷降地点*</td></tr><tr><td>場内ルート</td><td>積込地点1</td><td>場内ルート_荷降場</td></tr><tr><td>場外ルート</td><td>積込地点1</td><td>場外ルート_荷降場</td></tr><tr><td>黒松中</td><td>積込地点1</td><td>荷降地点1</td></tr></tbody></table><p>保存</p></div> <div><p>積込場 場外ルート、場内ルート、黒松中</p><p>75,000 50,000 25,000 0</p><p>計画 実績 成行</p><p>2025/03 2025/04</p><p>Totaled by Fleet loading history at “積込地点 1”</p><p>荷降場 場内ルート</p><p>40,000 20,000 0</p><p>計画 実績 成行</p><p>2025/03 2025/04</p><p>Totaled by Fleet unloading history at “場内ルート_荷降場”</p><p>荷降場 場外ルート</p><p>30,000 20,000 10,000 0</p><p>計画 実績 成行</p><p>02/10 02/24</p><p>Totaled by Fleet unloading history at “場外ルート_荷降場”</p><p>荷降場 黒松中</p><p>7,500 5,000 2,500 0</p><p>計画 実績 成行</p><p>02/12 02/14 02/16 02/18 02/...</p><p>Totaled by Fleet unloading history at “荷降地点1”</p></div>	Simulation	Fleet		走路	積込地点*	荷降地点*	場内ルート	積込地点1	場内ルート_荷降場	場外ルート	積込地点1	場外ルート_荷降場	黒松中	積込地点1	荷降地点1
Simulation	Fleet																
走路	積込地点*	荷降地点*															
場内ルート	積込地点1	場内ルート_荷降場															
場外ルート	積込地点1	場外ルート_荷降場															
黒松中	積込地点1	荷降地点1															



NO.

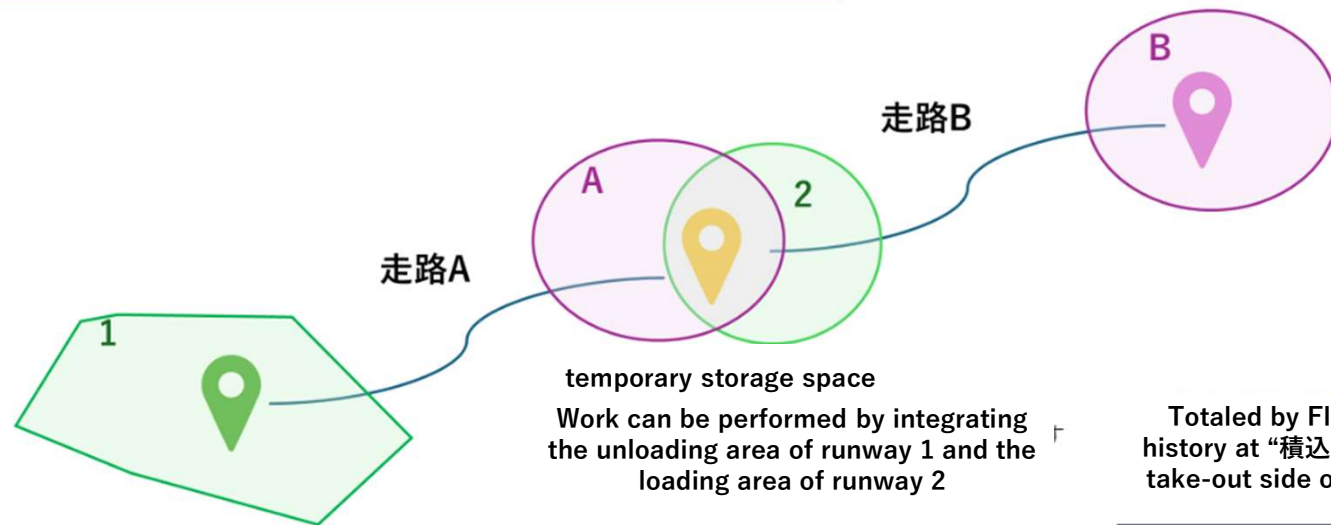
Target Functions

Overview

8

Machine  
Simulation  
(Function  
Improvement)  
[3/3]

Reflection on progress graph when temporary storage is set  
仮置場設定時の進捗グラフへの反映



Simulation	Fleet		
走路	積込地点*	荷降地点*	ルート
走路A	積込地点1	荷降地点A	なし
走路B	積込地点2	荷降地点B	なし

Totaled by Fleet loading  
history at “積込地点2” on the  
take-out side of the runway



