

Values Across All Replications

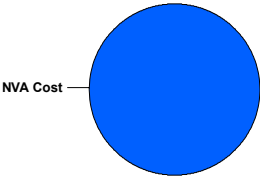
HACKATON PAE

Replications: 100 Time Units: Hours

Key Performance Indicators

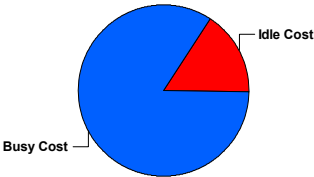
All Entities

| | Average |
|----------------------|---------------|
| Non-Value Added Cost | 2,123,960,456 |
| Other Cost | 0 |
| Transfer Cost | 0 |
| Value Added Cost | 0 |
| Wait Cost | 0 |
| Total Cost | 2,123,960,456 |



All Resources

| | Average |
|------------|-----------------|
| Busy Cost | 2,123,960,456 * |
| Idle Cost | 411,016,298 |
| Usage Cost | 0 |



Total Cost 2,534,976,754

* these costs are included in Entity Costs above.

System

| | Average |
|------------|---------------|
| Total Cost | 2,534,976,754 |
| Number Out | 15,563 |

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Entity

Time

| VA Time | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
|---------------|---------|------------|-----------------|-----------------|---------------|---------------|
| Crudo Mediano | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crudo pesado | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NVA Time | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 52.4474 | 0.09 | 51.4432 | 53.4753 | 24.0000 | 276.17 |
| Crudo pesado | 160.62 | 0.81 | 153.49 | 172.96 | 117.31 | 367.83 |
| Wait Time | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 76.3089 | 0.31 | 72.4233 | 79.3810 | 6.0167 | 3346.71 |
| Crudo pesado | 406.19 | 3.29 | 379.82 | 448.55 | 180.19 | 7616.64 |
| Transfer Time | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crudo pesado | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Time | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crudo pesado | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Time | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 91.3225 | 0.19 | 88.8176 | 93.1599 | 30.0167 | 602.21 |
| Crudo pesado | 264.08 | 0.55 | 258.27 | 271.01 | 210.02 | 666.02 |

Cost

| VA Cost | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
|---------------|-----------|------------|-----------------|-----------------|---------------|---------------|
| Crudo Mediano | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crudo pesado | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NVA Cost | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 112154.23 | 271.04 | 109413.62 | 115181.01 | 0.00 | 762221.06 |
| Crudo pesado | 430821.62 | 2,318.76 | 409759.46 | 464626.64 | 257535.94 | 1015223 |

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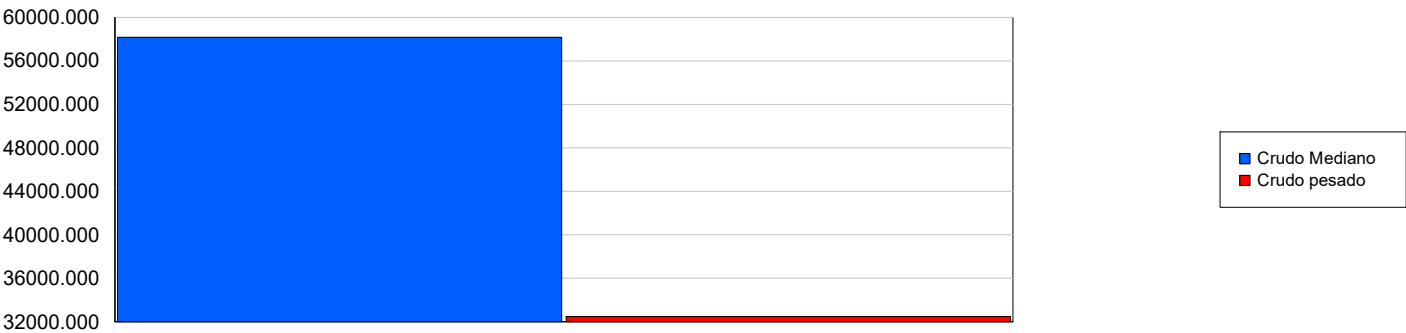
Entity

Cost

| Wait Cost | | | | | | |
|---------------|-----------|------------|-----------------|-----------------|---------------|---------------|
| | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crudo pesado | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Cost | | | | | | |
| | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crudo pesado | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transfer Cost | | | | | | |
| | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crudo pesado | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Cost | | | | | | |
| | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| Crudo Mediano | 112154.23 | 271.04 | 109413.62 | 115181.01 | 0.00 | 762221.06 |
| Crudo pesado | 430821.62 | 2,318.76 | 409759.46 | 464626.64 | 257535.94 | 1015223 |

Other

| Number In | | | | |
|---------------|----------|------------|-----------------|-----------------|
| | Average | Half Width | Minimum Average | Maximum Average |
| Crudo Mediano | 58182.33 | 10.41 | 58020.00 | 58316.00 |
| Crudo pesado | 32493.25 | 10.12 | 32364.00 | 32638.00 |



| Number Out | | | | |
|---------------|----------|------------|-----------------|-----------------|
| | Average | Half Width | Minimum Average | Maximum Average |
| Crudo Mediano | 58166.95 | 10.40 | 58005.00 | 58300.00 |
| Crudo pesado | 32453.12 | 10.17 | 32329.00 | 32595.00 |

Values Across All Replications

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Replications: 100 Time Units: Hours

Entity

Other

| WIP | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
|---------------|---------|------------|-----------------|-----------------|---------------|---------------|
| Crudo Mediano | 14.4079 | 0.00 | 14.3679 | 14.4473 | 0.00 | 28.0000 |
| Crudo pesado | 35.5569 | 0.01 | 35.4526 | 35.6937 | 0.00 | 104.00 |

Values Across All Replications

HACKATON PAE

Replications: 100 Time Units: Hours

Queue

Time

| Waiting Time | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
|--|------------|------------|-----------------|-----------------|---------------|---------------|
| Batch Cor Pr.Queue | 35.7930 | 0.03 | 35.4888 | 36.1265 | 0.00 | 168.00 |
| Batch Land.Queue | 0.01666197 | 0.00 | 0.01664804 | 0.01666667 | 0.00 | 0.01666667 |
| Batch ol PR.Queue | 72.0000 | 0.00 | 72.0000 | 72.0000 | 0.00 | 144.00 |
| Batch sea a sur.Queue | 7.0459 | 0.01 | 6.9433 | 7.1297 | 0.00 | 77.9833 |
| Charge Transport and Discharge.Queue | 0.03316871 | 0.00 | 0.01079922 | 0.07379707 | 0.00 | 94.2270 |
| Hold until 3.Queue | 0.5487 | 0.01 | 0.4690 | 0.6549 | 0.00 | 73.1658 |
| Hold until 5.Queue | 22.5356 | 0.02 | 22.2437 | 22.7710 | 0.00 | 29.9833 |
| Hub Caleta Cordova.Queue | 2.9474 | 0.08 | 2.0110 | 4.3326 | 0.00 | 522.12 |
| Hub Caleta Oliva.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Cordoba free.Queue | 0.01132187 | 0.01 | 0.00 | 0.2410 | 0.00 | 258.12 |
| Hub Oliva free.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Puerto Rosales.Queue | 0.00232882 | 0.00 | 0.00007228 | 0.01206700 | 0.00 | 18.0167 |
| Land transport.Queue | 17.8664 | 0.00 | 17.8314 | 17.8942 | 0.00 | 47.9833 |
| Transport Cord a PR and travel back.Queue | 0.05645073 | 0.00 | 0.01344857 | 0.1346 | 0.00 | 52.5044 |
| Transport Oliva a PR and travel back.Queue | 0.02303610 | 0.00 | 0.00172953 | 0.08183551 | 0.00 | 74.0119 |

Cost

Values Across All Replications

HACKATON PAE

Replications: 100 Time Units: Hours

Queue

Cost

| Waiting Cost | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
|--|---------|------------|-----------------|-----------------|---------------|---------------|
| Batch Cor Pr.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Batch Land.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Batch ol PR.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Batch sea a sur.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Charge Transport and Discharge.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hold until 3.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hold until 5.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Caleta Cordova.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Caleta Oliva.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Cordoba free.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Oliva free.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Puerto Rosales.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Land transport.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport Cord a PR and travel back.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport Oliva a PR and travel back.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Other

HACKATON PAE

Replications: 100 Time Units: Hours

Queue

Other

| Number Waiting | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
|--|------------|------------|-----------------|-----------------|---------------|---------------|
| Batch Cor Pr.Queue | 2.9826 | 0.00 | 2.9572 | 3.0105 | 0.00 | 7.0000 |
| Batch Cord PR Afra.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Batch Land.Queue | 0.00071607 | 0.00 | 0.00071224 | 0.00072065 | 0.00 | 5.0000 |
| Batch ol PR.Queue | 3.0004 | 0.00 | 3.0004 | 3.0004 | 0.00 | 7.0000 |
| Batch Olivia PR Afra.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Batch sea a sur.Queue | 0.9974 | 0.00 | 0.9835 | 1.0096 | 0.00 | 3.0000 |
| Charge Transport and Discharge.Queue | 0.00156500 | 0.00 | 0.00050963 | 0.00348135 | 0.00 | 2.0000 |
| Hold until 3.Queue | 0.07767979 | 0.00 | 0.06649002 | 0.0925 | 0.00 | 15.0000 |
| Hold until 5.Queue | 0.9686 | 0.00 | 0.9621 | 0.9737 | 0.00 | 2.0000 |
| Hub Caleta Cordova.Queue | 0.2459 | 0.01 | 0.1676 | 0.3611 | 0.00 | 22.0000 |
| Hub Caleta Oliva.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Cordoba free.Queue | 0.00094355 | 0.00 | 0.00 | 0.02008334 | 0.00 | 22.0000 |
| Hub Oliva free.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hub Puerto Rosales.Queue | 0.00042978 | 0.00 | 0.00001334 | 0.00222709 | 0.00 | 6.0000 |
| Land transport.Queue | 0.7445 | 0.00 | 0.7430 | 0.7457 | 0.00 | 2.0000 |
| Transport Cord a PR and travel back AFRA.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport Cord a PR and travel back.Queue | 0.00067369 | 0.00 | 0.00016020 | 0.00160442 | 0.00 | 4.0000 |
| Transport Oliva a PR and travel back.Queue | 0.00013714 | 0.00 | 0.00001030 | 0.00048718 | 0.00 | 1.0000 |
| Transport Olivia a PR and travel back AFRA.Queue | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Values Across All Replications

HACKATON PAE

Replications: 100 Time Units: Hours

Resource

Usage

| Instantaneous Utilization | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
|---------------------------|---------|------------|-----------------|-----------------|---------------|---------------|
| | | | | | | |
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 1.0000 | 0.00 | 1.0000 | 1.0000 | 0.00 | 1.0000 |
| Panamax | 0.7322 | 0.00 | 0.7310 | 0.7330 | 0.00 | 1.0000 |
| Puerto Cordova | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Oliva | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Number Busy | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| | | | | | | |
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 1.0000 | 0.00 | 1.0000 | 1.0000 | 0.00 | 1.0000 |
| Panamax | 4.3932 | 0.00 | 4.3860 | 4.3983 | 0.00 | 6.0000 |
| Puerto Cordova | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Oliva | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Number Scheduled | Average | Half Width | Minimum Average | Maximum Average | Minimum Value | Maximum Value |
| | | | | | | |
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 1.0000 | 0.00 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Panamax | 6.0000 | 0.00 | 6.0000 | 6.0000 | 6.0000 | 6.0000 |
| Puerto Cordova | 1.0000 | 0.00 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Puerto Oliva | 1.0000 | 0.00 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Values Across All Replications

HACKATON PAE

Replications: 100 Time Units: Hours

Resource

Usage

| Scheduled Utilization | Average | Half Width | Minimum Average | Maximum Average |
|-----------------------|---------|------------|-----------------|-----------------|
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 1.0000 | 0.00 | 1.0000 | 1.0000 |
| Panamax | 0.7322 | 0.00 | 0.7310 | 0.7330 |
| Puerto Cordova | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Oliva | 0.00 | 0.00 | 0.00 | 0.00 |



| Total Number Seized | Average | Half Width | Minimum Average | Maximum Average |
|---------------------|----------|------------|-----------------|-----------------|
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 7300.00 | 0.00 | 7300.00 | 7300.00 |
| Panamax | 11400.59 | 1.31 | 11383.00 | 11415.00 |
| Puerto Cordova | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Oliva | 0.00 | 0.00 | 0.00 | 0.00 |



Cost

Values Across All Replications

HACKATON PAE

Replications: 100 Time Units: Hours

Resource

Cost

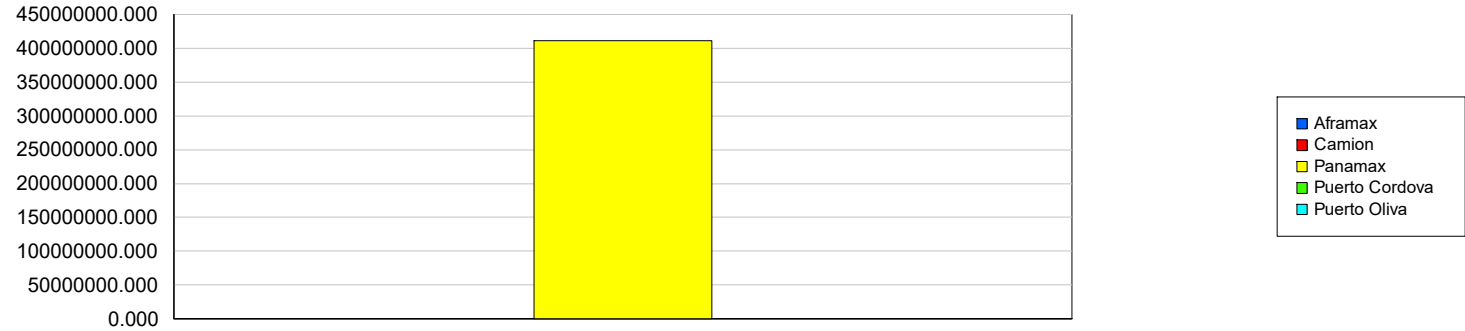
Busy Cost

| | Average | Half Width | Minimum Average | Maximum Average |
|----------------|----------|------------|-----------------|-----------------|
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 0.00 | 0.00 | 0.00 | 0.00 |
| Panamax | ***** ** | 254,573.20 | ***** ** | ***** ** |
| Puerto Cordova | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Oliva | 0.00 | 0.00 | 0.00 | 0.00 |



Idle Cost

| | Average | Half Width | Minimum Average | Maximum Average |
|----------------|-----------|------------|-----------------|-----------------|
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 0.00 | 0.00 | 0.00 | 0.00 |
| Panamax | 411016298 | 133,941.39 | 409706815 | 412857435 |
| Puerto Cordova | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Oliva | 0.00 | 0.00 | 0.00 | 0.00 |



Values Across All Replications

HACKATON PAE

Replications: 100 Time Units: Hours

Resource

Cost

| Usage Cost | Average | Half Width | Minimum Average | Maximum Average |
|----------------|---------|------------|-----------------|-----------------|
| Aframax | 0.00 | 0.00 | 0.00 | 0.00 |
| Camion | 0.00 | 0.00 | 0.00 | 0.00 |
| Panamax | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Cordova | 0.00 | 0.00 | 0.00 | 0.00 |
| Puerto Oliva | 0.00 | 0.00 | 0.00 | 0.00 |