

Optimierte Crew- und Wartungsplanung an Bord mithilfe von SCEDAS[®]

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From a challenge to a product.

Complex assignment problem



Human resources



Maintenance



Voyage



Regulations



Determination of workload,
work schedules and optimal
manning level

From multiple projects with several shipping companies resulted the SCEDAS® software suite with its modules

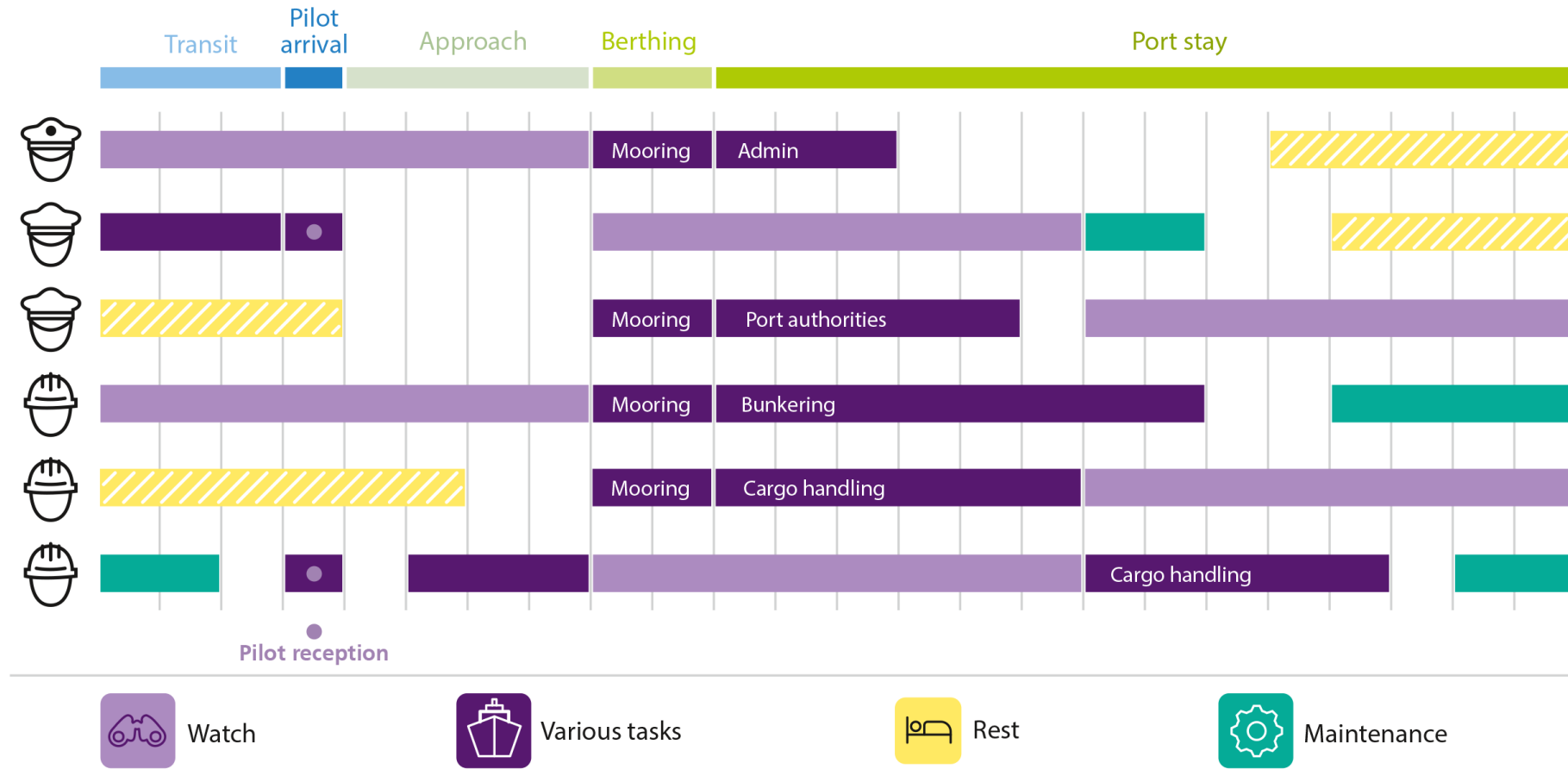
- **SCEDAS® Office** for crew demand assessment and workload planning
- **SCEDAS® Onboard** for crew scheduling on board the vessel
- **SCEDAS® Voyage Management** as part of the Onboard and Office modules
- **SCEDAS® Timekeeper** for data collection and analysis on tasks and workloads



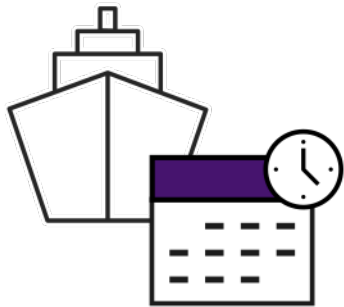


SCEDAS®

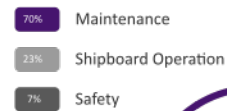
INTERTWINED CREW AND MAINTNANCE SCHEDULING



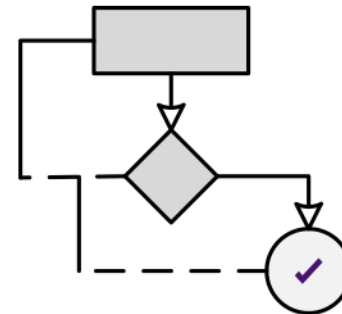
Decision support through SCEDAS[®].



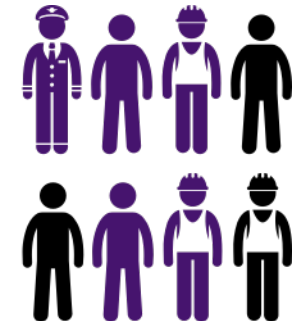
Task based work hour
recording



Workload analysis



Powerful scheduling
algorithms

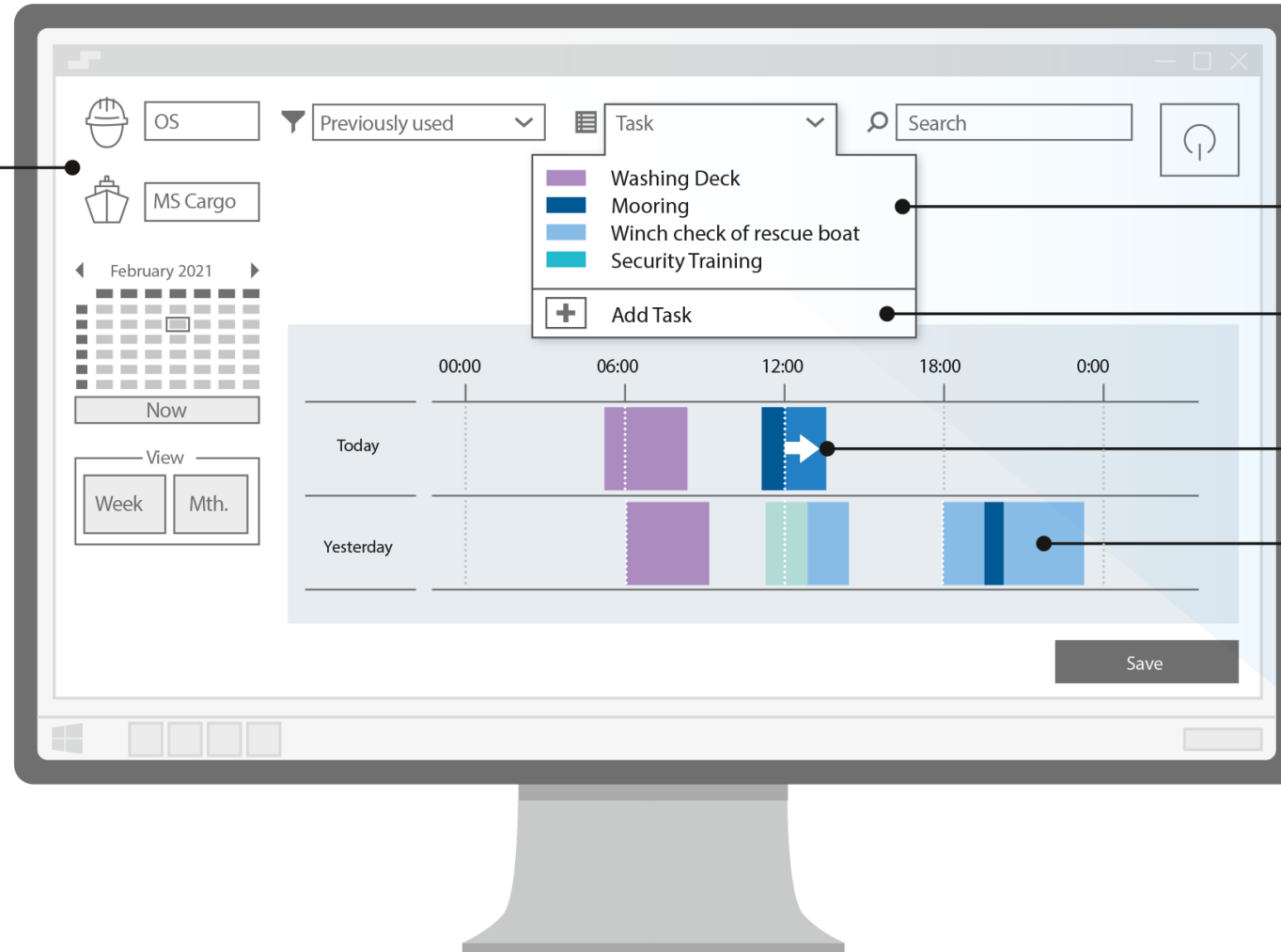


Crew demand & work
schedules



SCEDAS[®] TASK BASED WORK RECORDS

Seafarer log-ins
with individual ID



Selection of jobs
from predefined

Possibility to define
additional jobs

Drag-and-drop

Seafarer specifies
jobs done

KEY FACTS OF DATA COLLECTION

318.841
recorded work hours

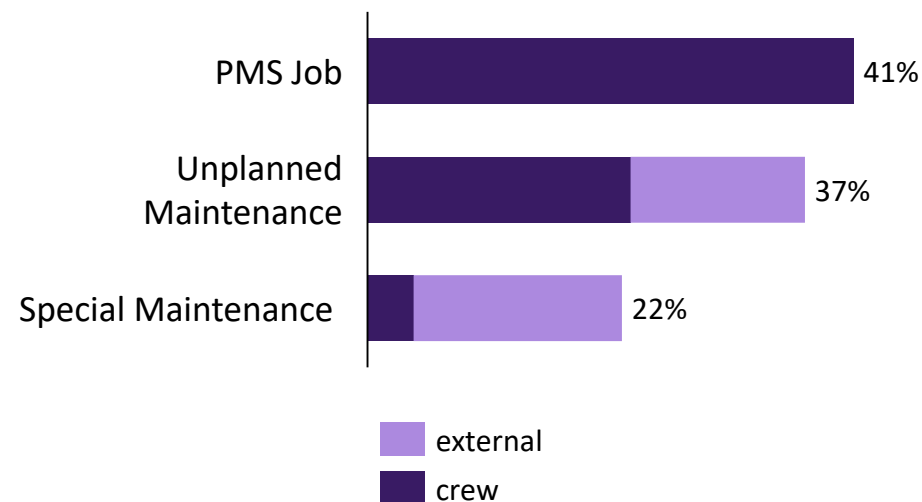
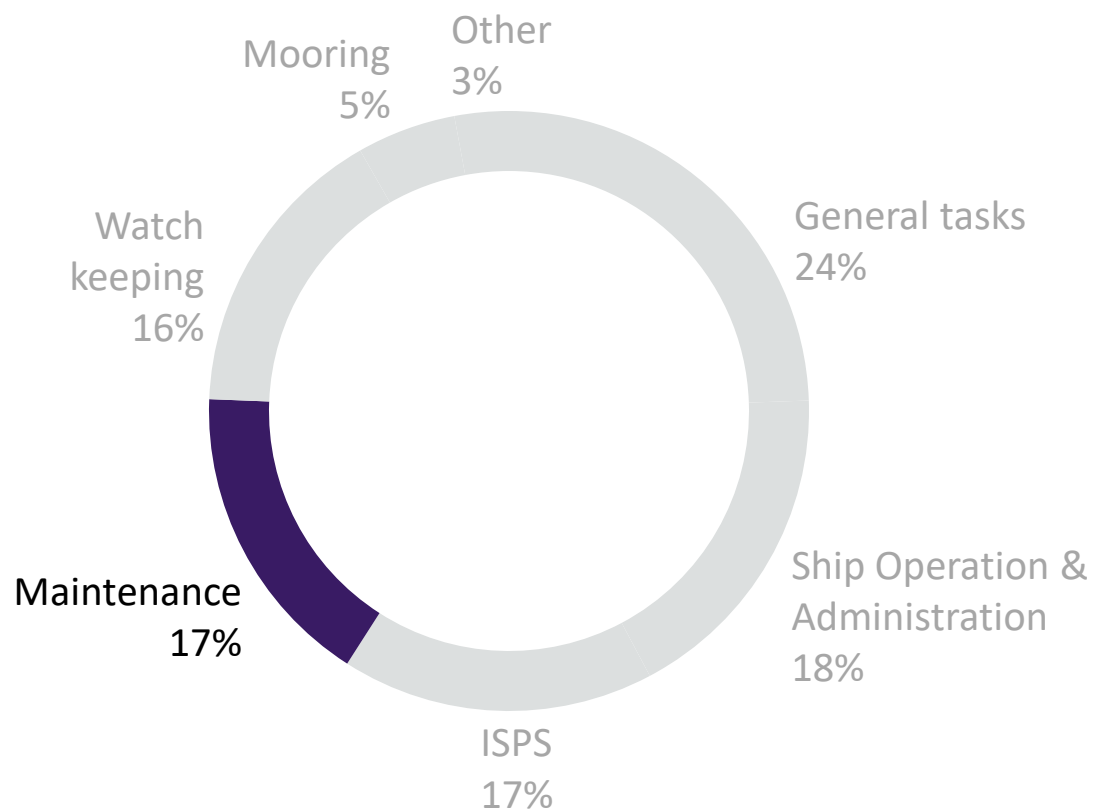
408
harmonized
tasks

>1200
PMS jobs
per ship



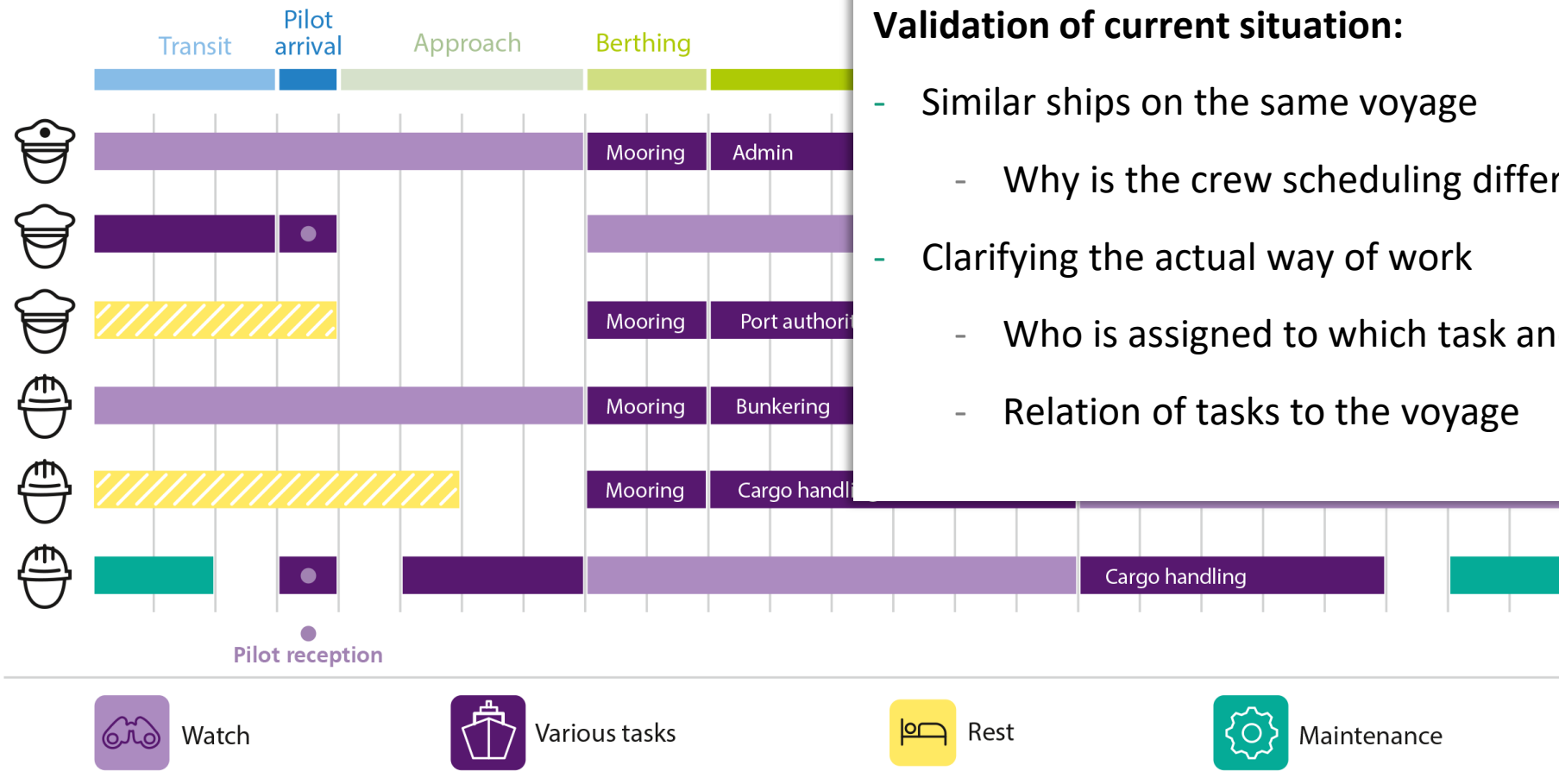


SCEDAS® WORKLOAD IN NUMBERS





SCEDAS[®] DETAILED WORK SCHEDULES



Validation of current situation:

- Similar ships on the same voyage
 - Why is the crew scheduling different?
- Clarifying the actual way of work
 - Who is assigned to which task and why?
 - Relation of tasks to the voyage



Ship



Voyage



Regulations

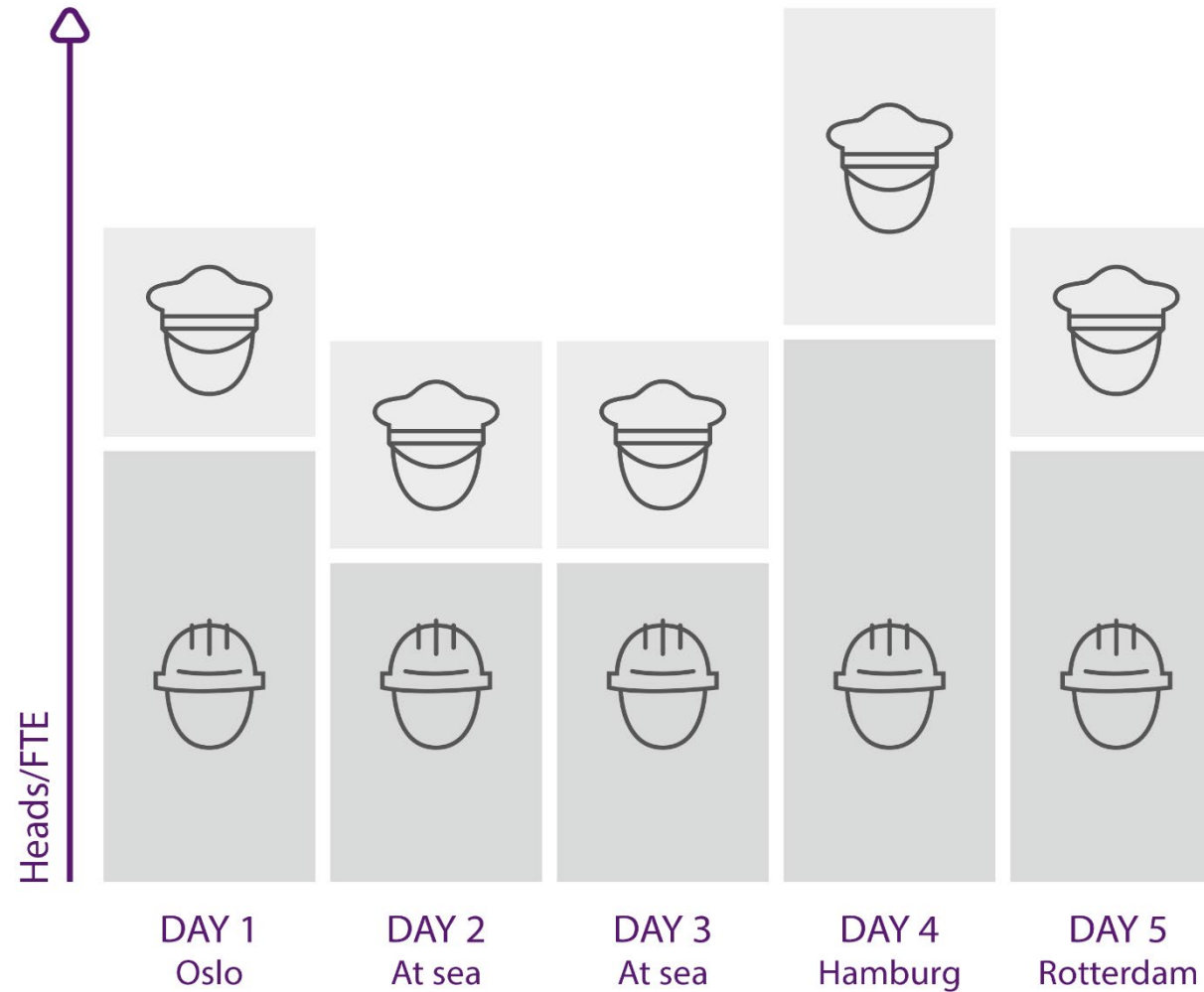


Minimum crew complement
and their deployment





SCEDAS[®] CREW DEMAND IN HEADS

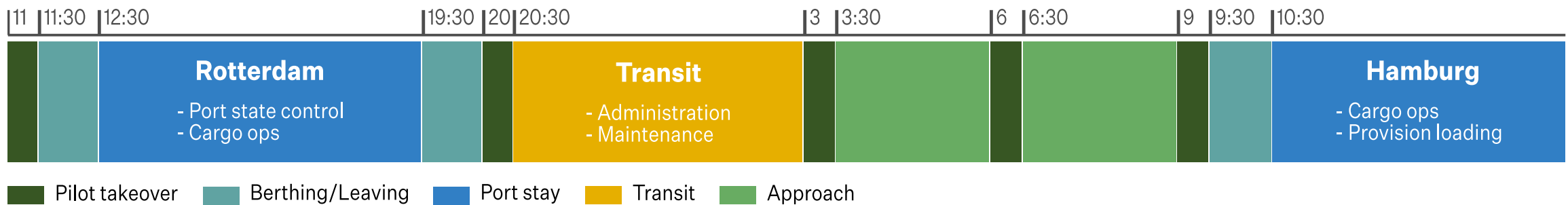
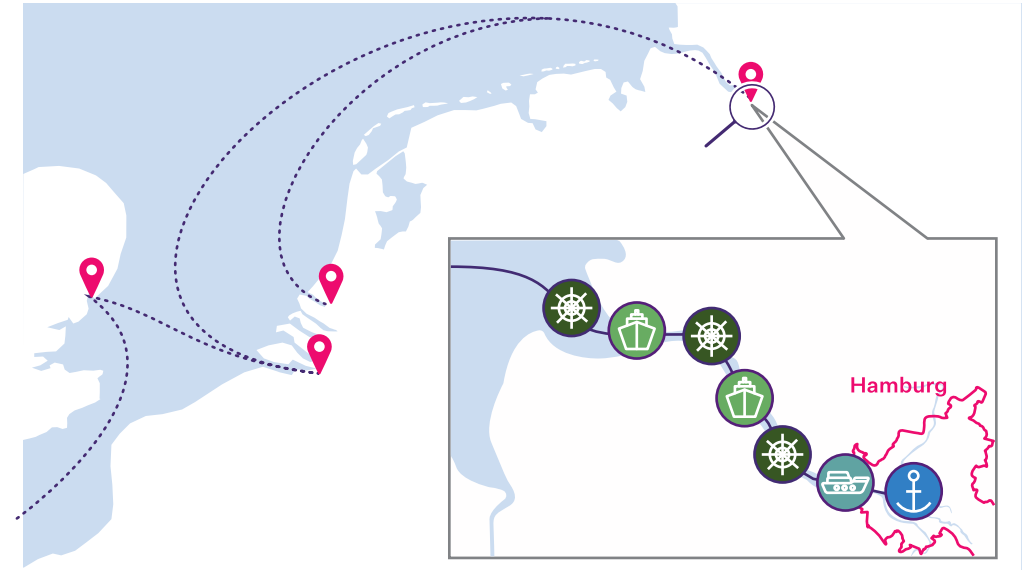




SCEDAS[®] VOYAGE MANAGEMENT

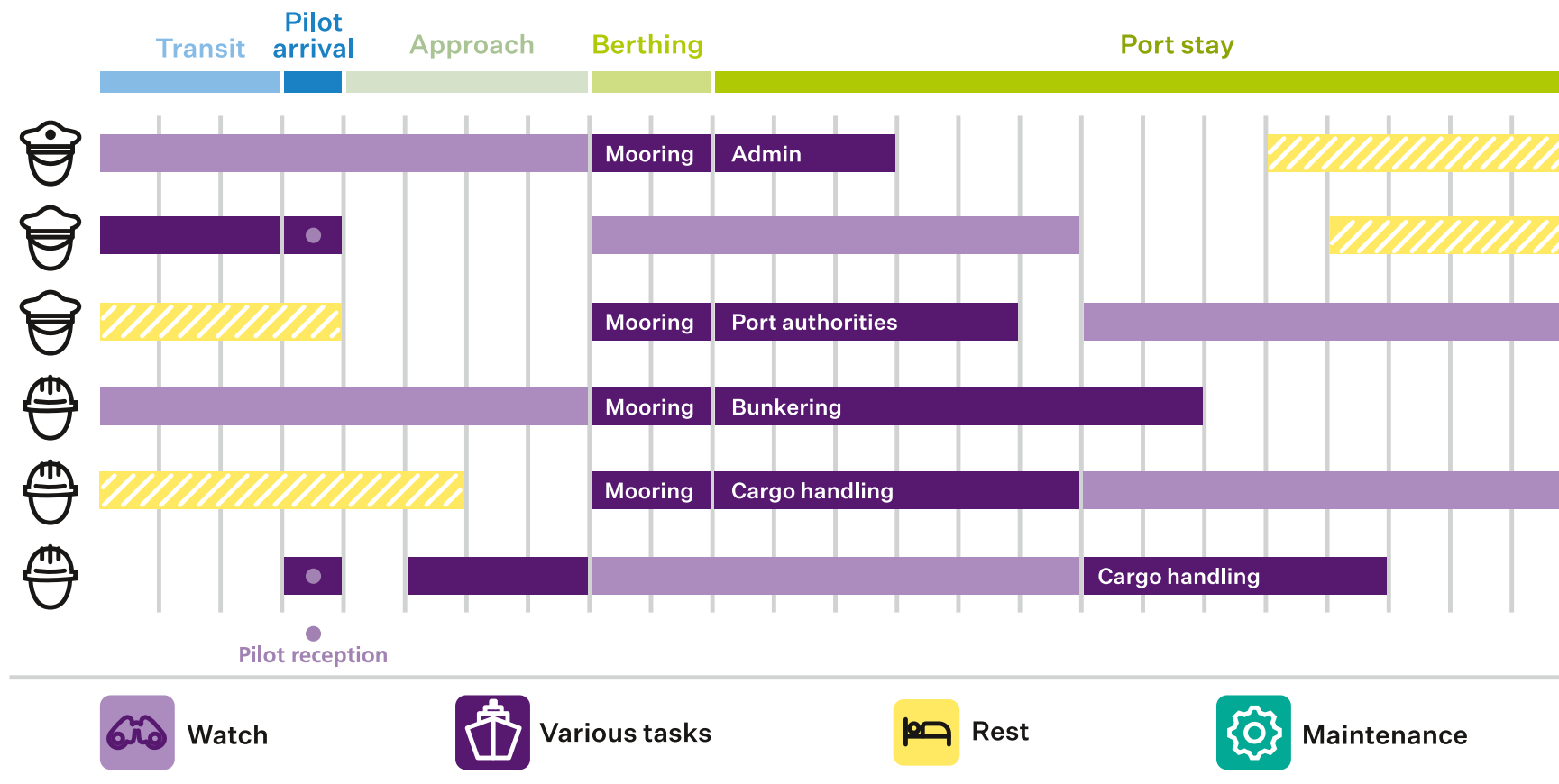
SCEDAS[®] Voyage Management is a tool for holistic voyage management that

- combines navigational route planning with operative scheduling (cargo ops, authorities, provision,...)
- plans the voyage in a sequence of ship operations
- is a central system for voyage updates in a well-defined data format
- eases the complex communication task between stakeholders that share the ship as a common resource



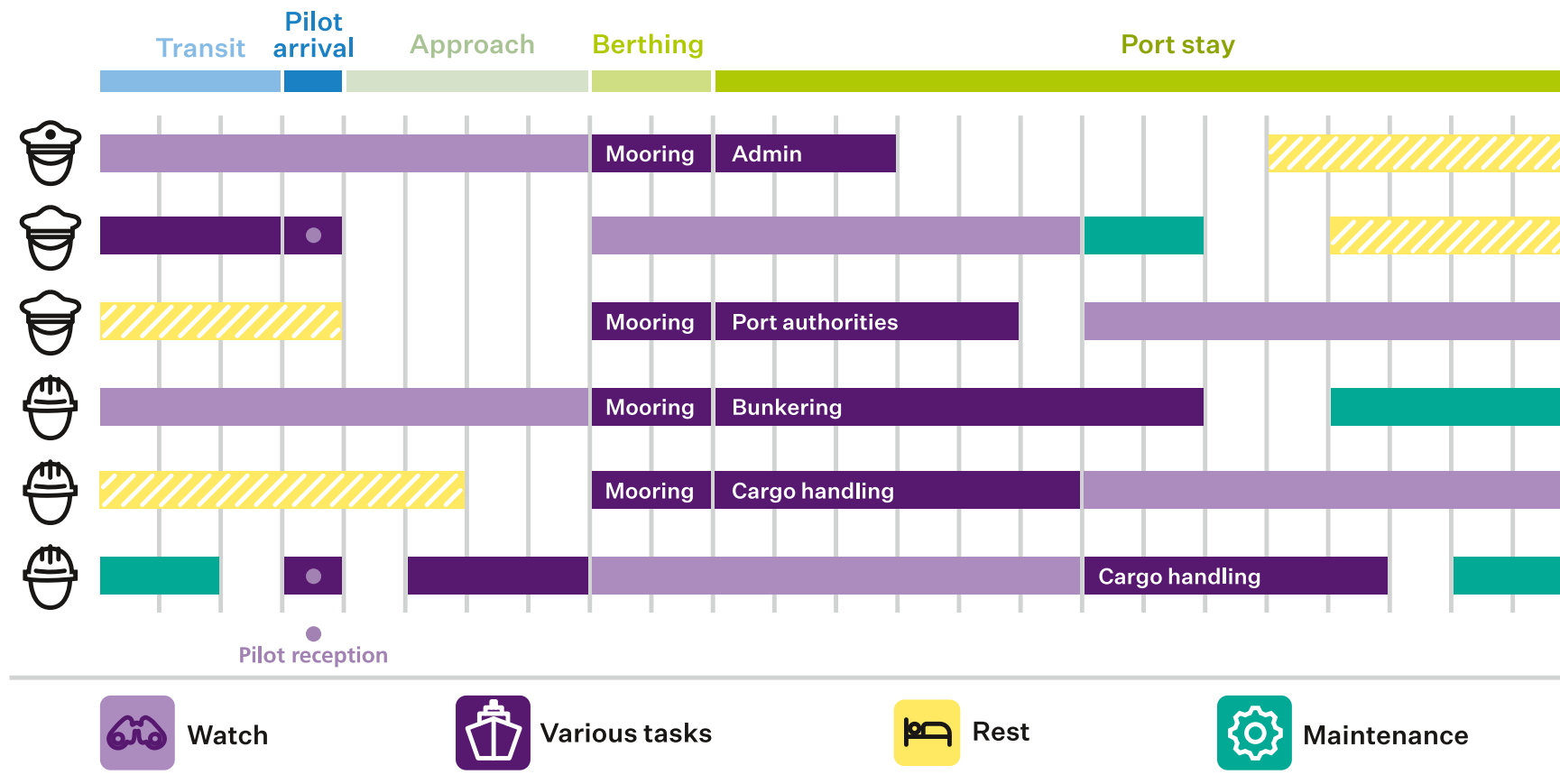


SCEDAS[®] DETAILED WORK SCHEDULES





SCEDAS[®] PLANNED MAINTENANCE





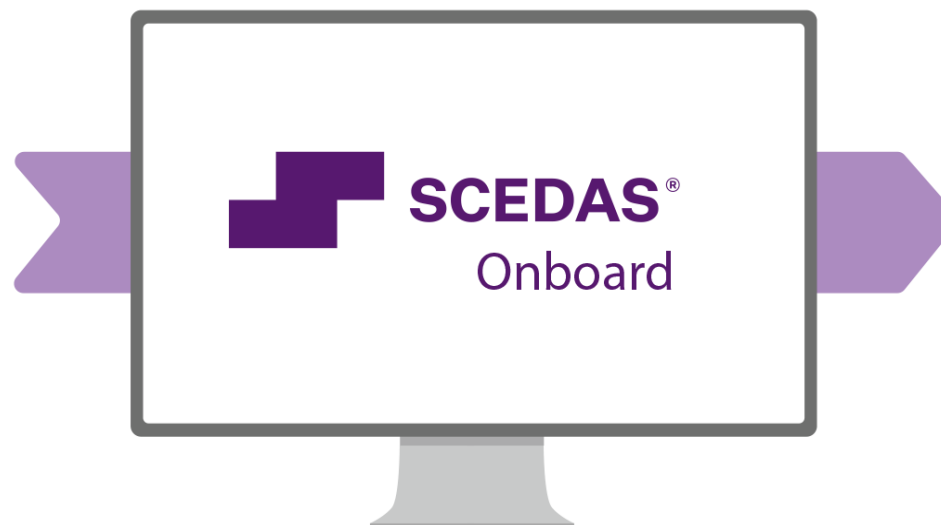
Voyage updates



Available Crew



Recent work hours

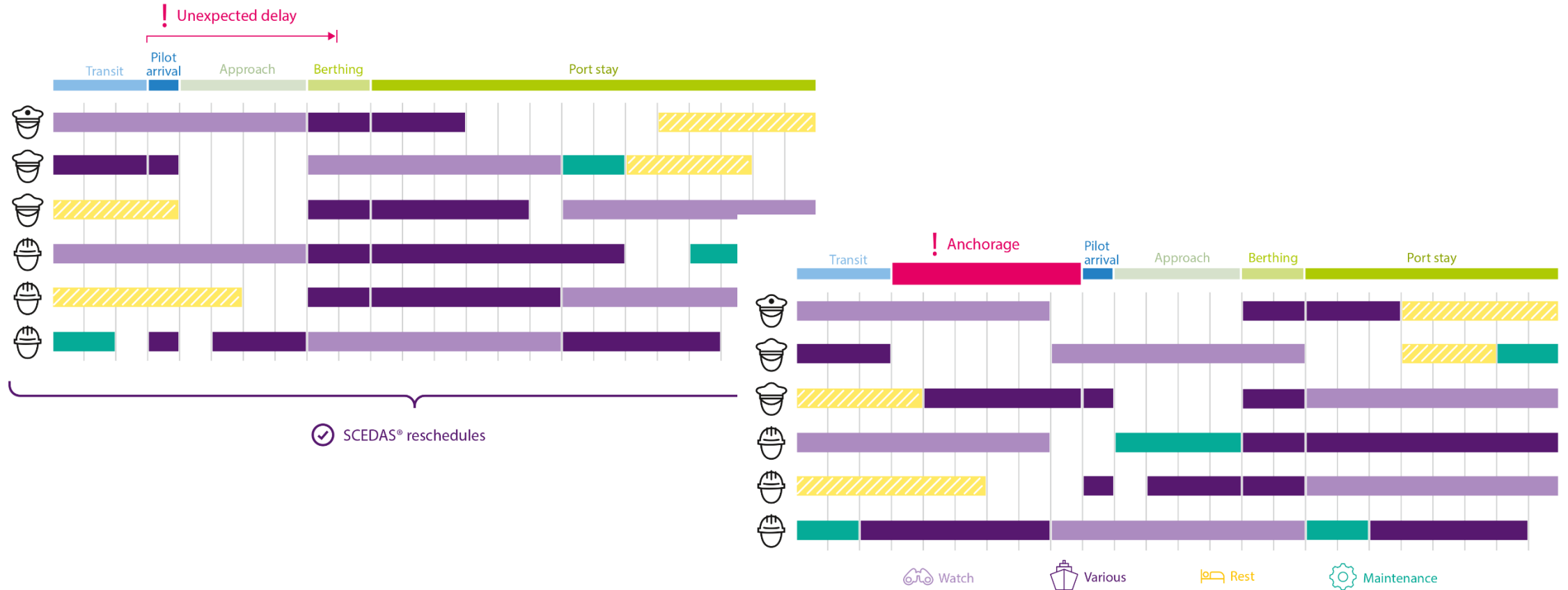


Detailed onboard
work schedules



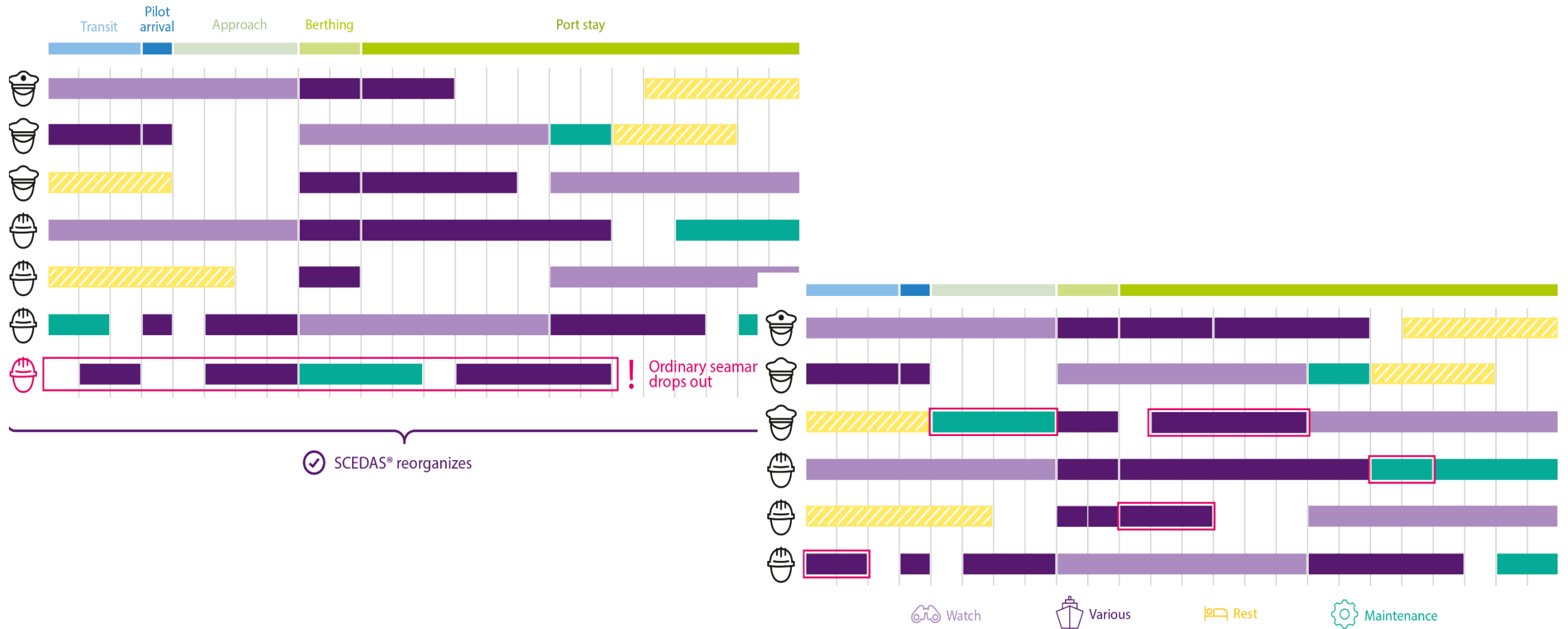


SCEDAS[®] REACTING TO CHANGES IN VOYAGE PLAN





SCEDAS[®] NONCOMPLAINT MINIMIZATION





SCEDAS[®] CURRENT ACHIEVEMENTS

- Data and algorithm based calculation of adopted crew demand for the current reduced occupancy considering
 - Specific ship class
 - Specific route
- Quantification of specific organizational measures in terms of crew demand and crew schedule considering
 - PMS Strategy
 - COVID-19 measures
- Support and improvement of the internal communication by enabling data driven discussions rather than experience and feeling
- Cost savings





SCEDAS[®] BENEFITS



Optimized crew
demand



Assessment of time
available for e.g.
maintenance tasks



Risk assessment
regarding adherence to
regulatory compliance



Transparency through
data driven basis of
discussion



What-if scenario models
(e.g. for maintenance
strategies)



Informed decision-
making process for
crewing budgets



WORKFORCE PLANNING AND COMPLIANCE.

MATHEMATICALLY OPTIMIZED.

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