

ColdStorageService

Progetto per l'esame di

Ingegneria dei Sistemi Software

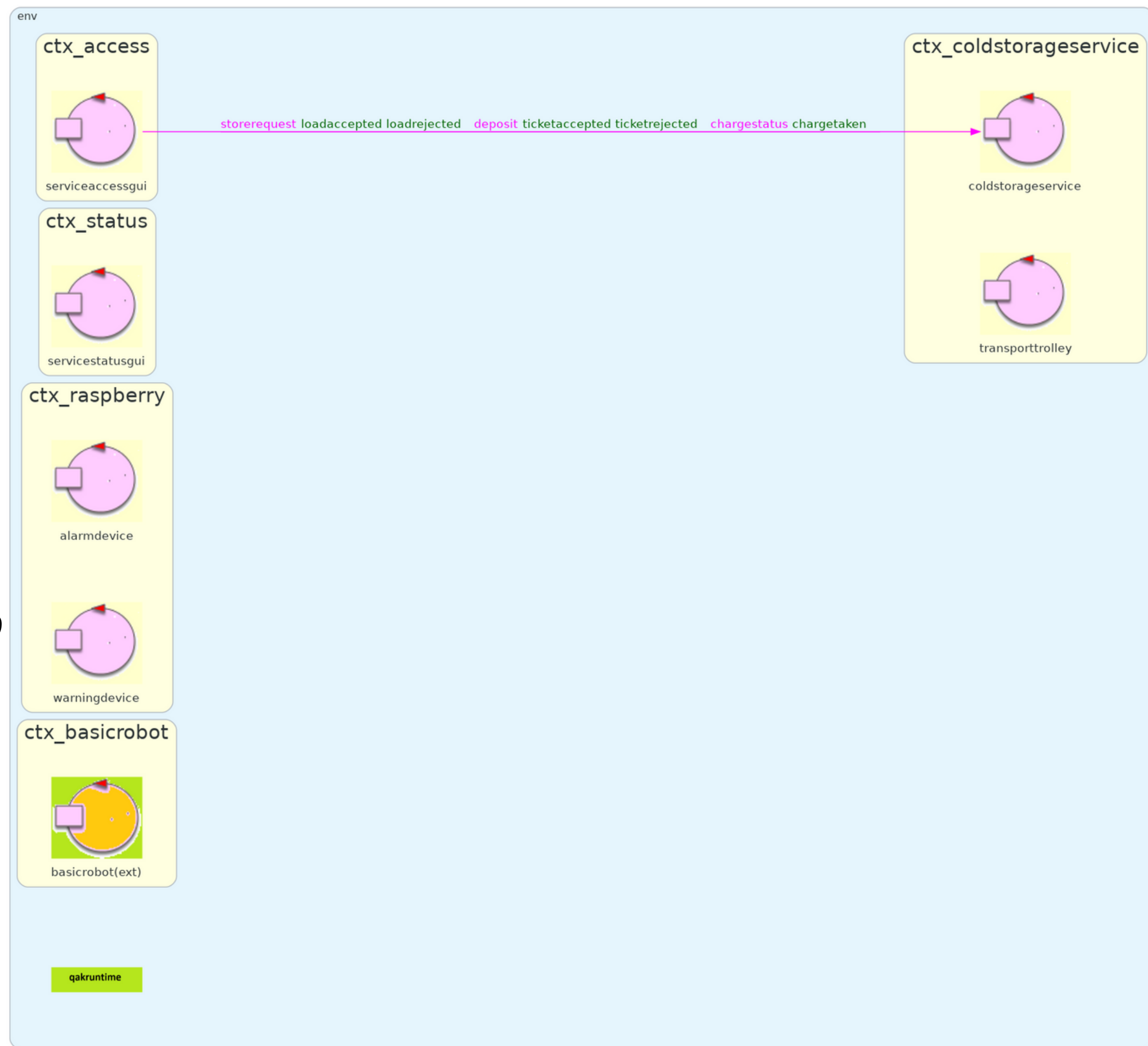
Barbieri Riccardo

Ruberto Leonardo

Sprint 0

Pianificazione

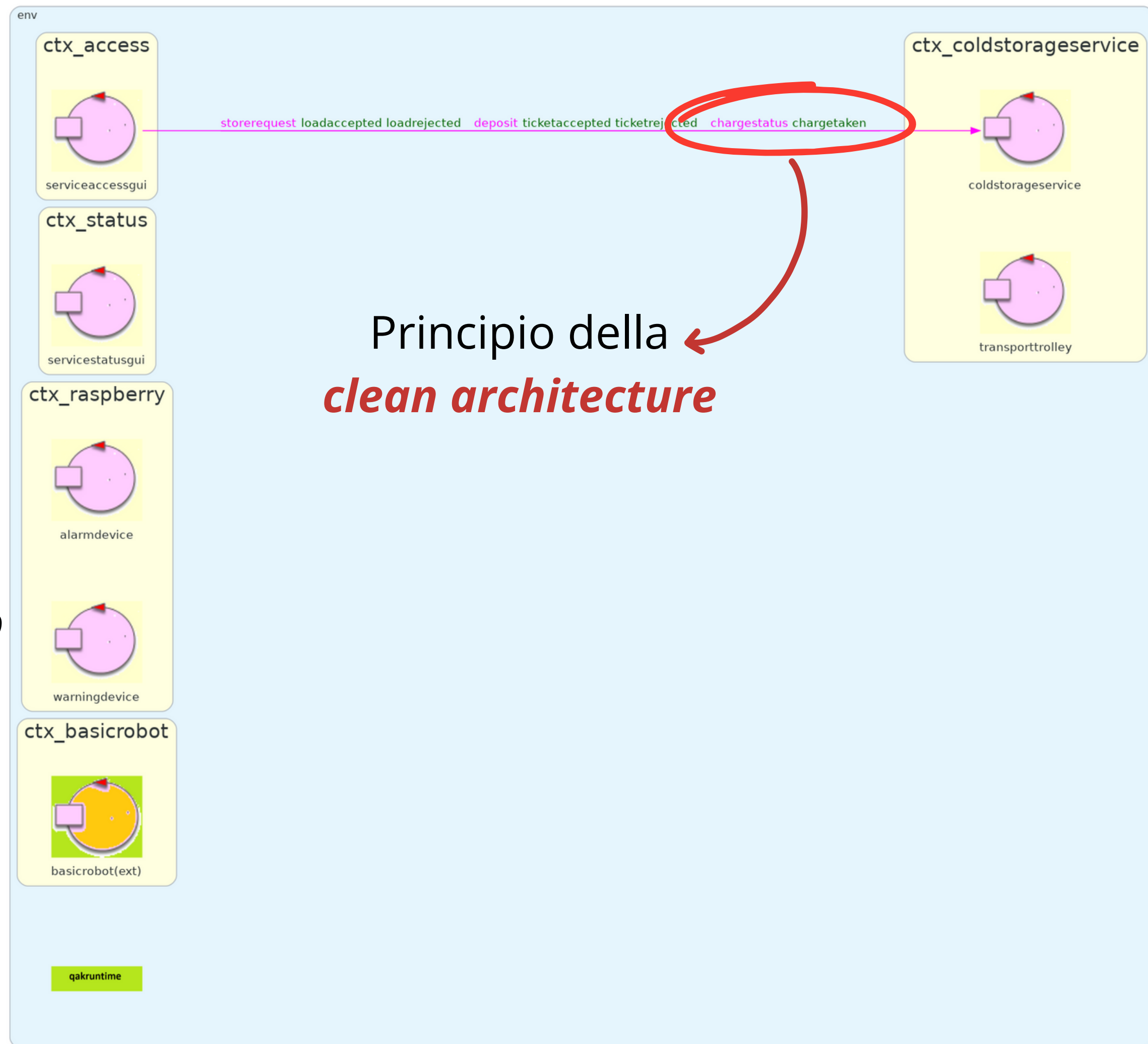
Creazione del primo ***modello logico***
dell'architettura



Sprint 0

Pianificazione

Creazione del primo ***modello logico***
dell'architettura



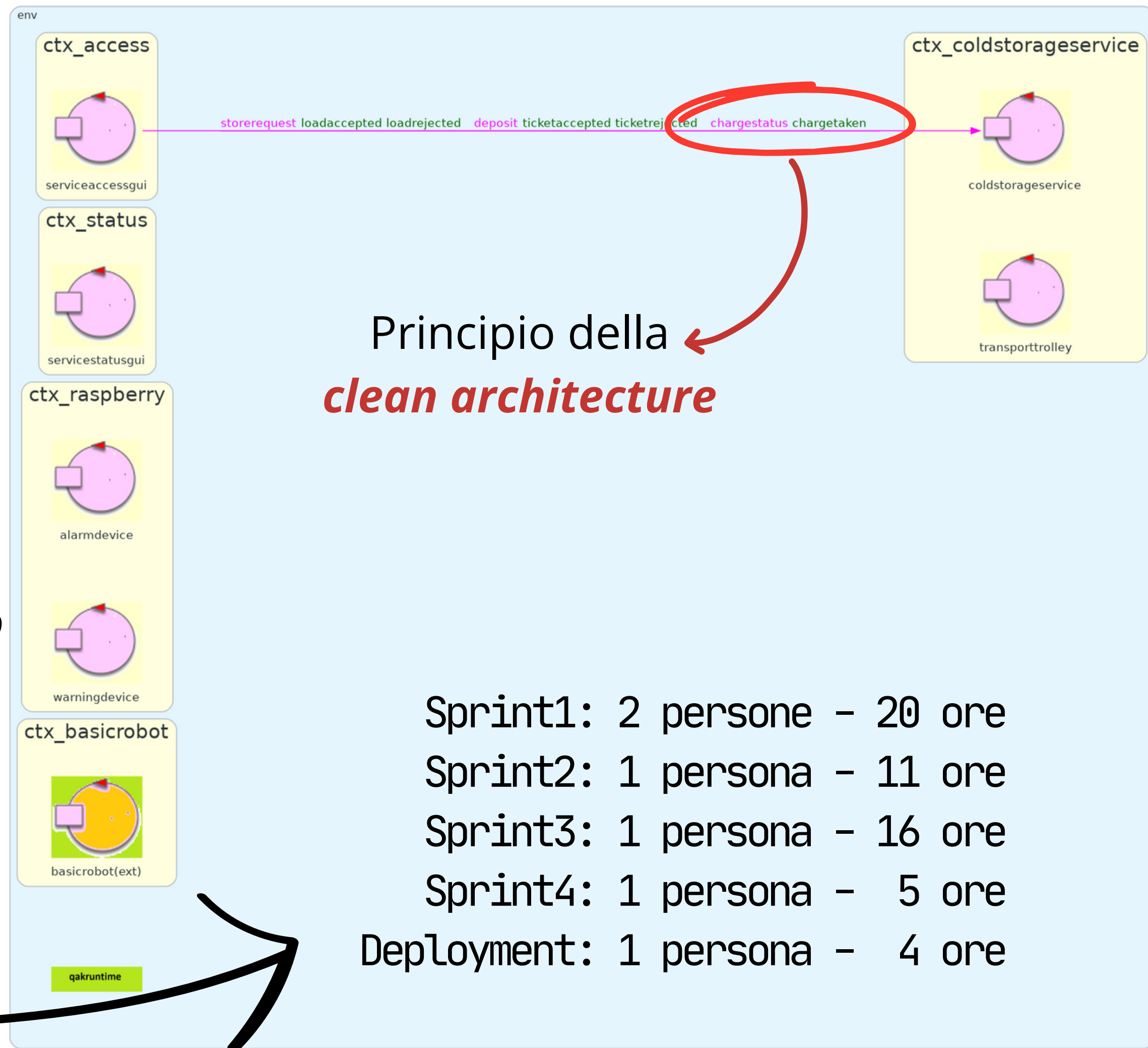
Sprint 0

Pianificazione

Creazione del primo **modello logico**
dell'architettura

Definizione degli **Sprint**

Suddivisione del carico di lavoro
in **termini temporali**



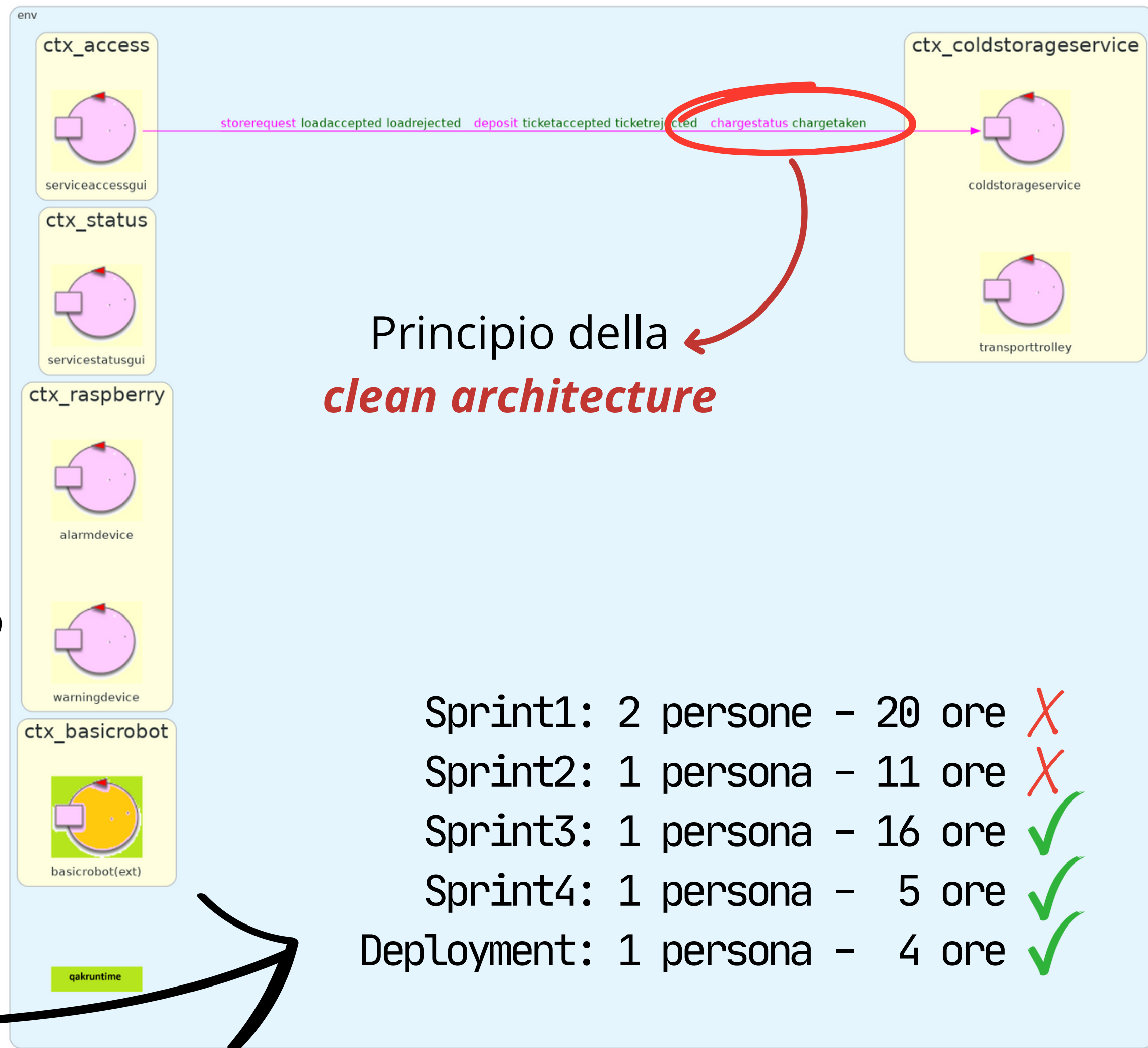
Sprint 0

Pianificazione

Creazione del primo **modello logico**
dell'architettura

Definizione degli **Sprint**

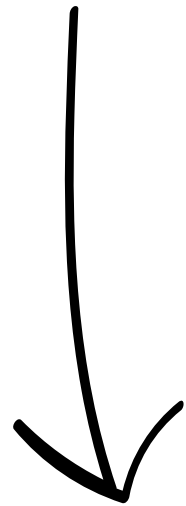
Suddivisione del carico di lavoro
in **termini temporali**



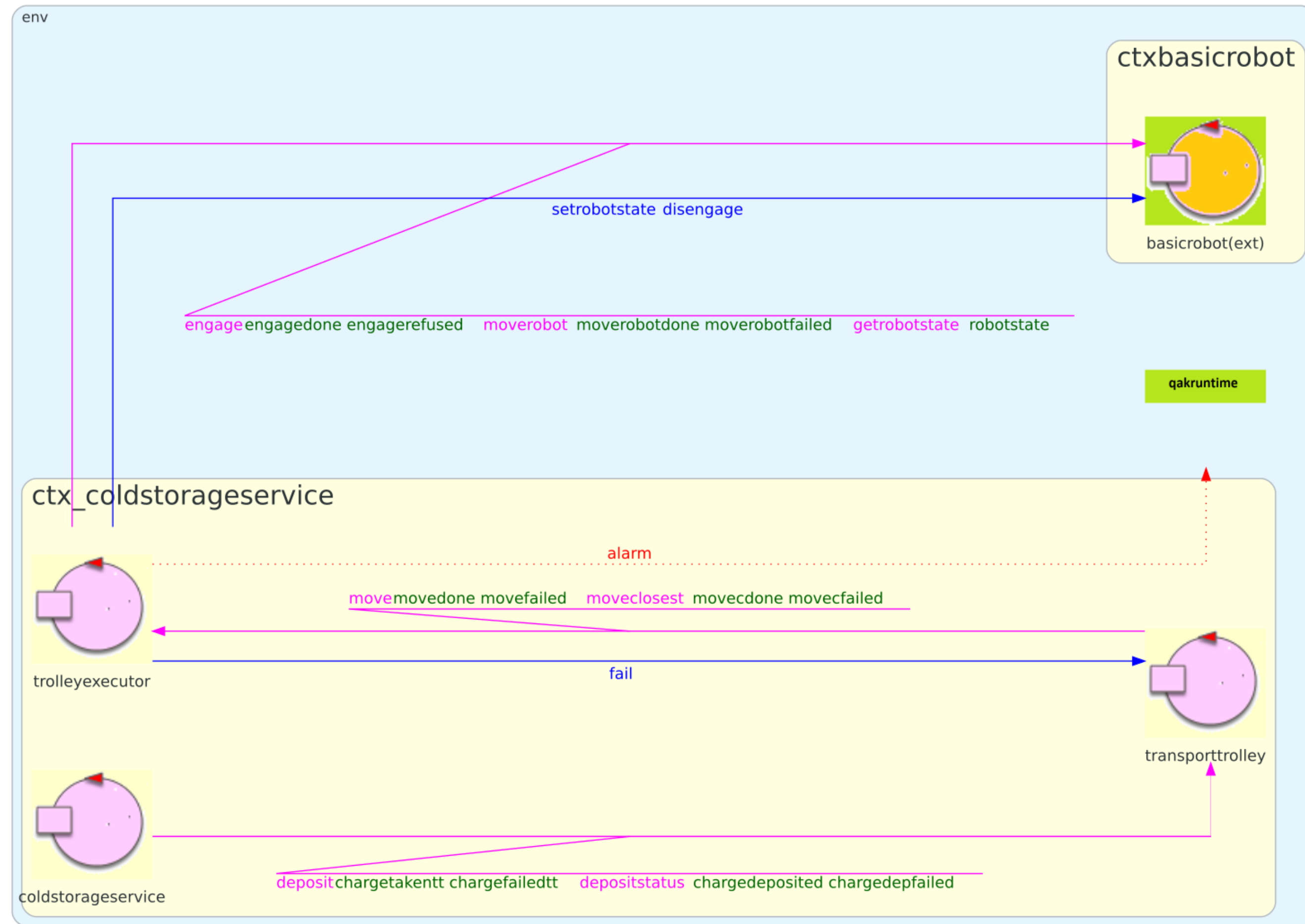
Sprint 1

Core - business

Principio di **singola responsabilità**



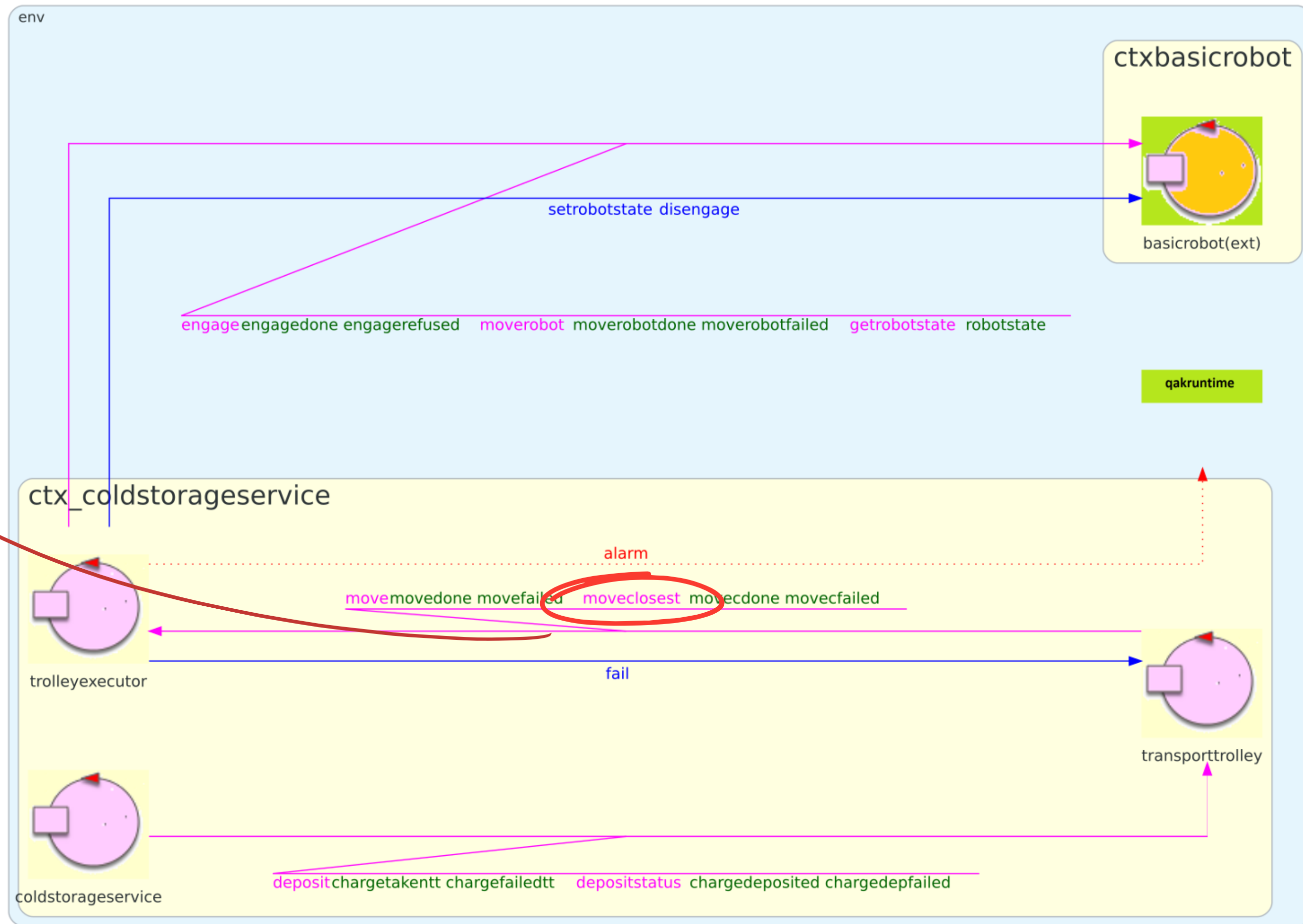
Nuovo attore
TrolleyExecutor



Sprint 1

TrolleyExecutor

Ottimizzazione
movimento del
robot con
moveclosest



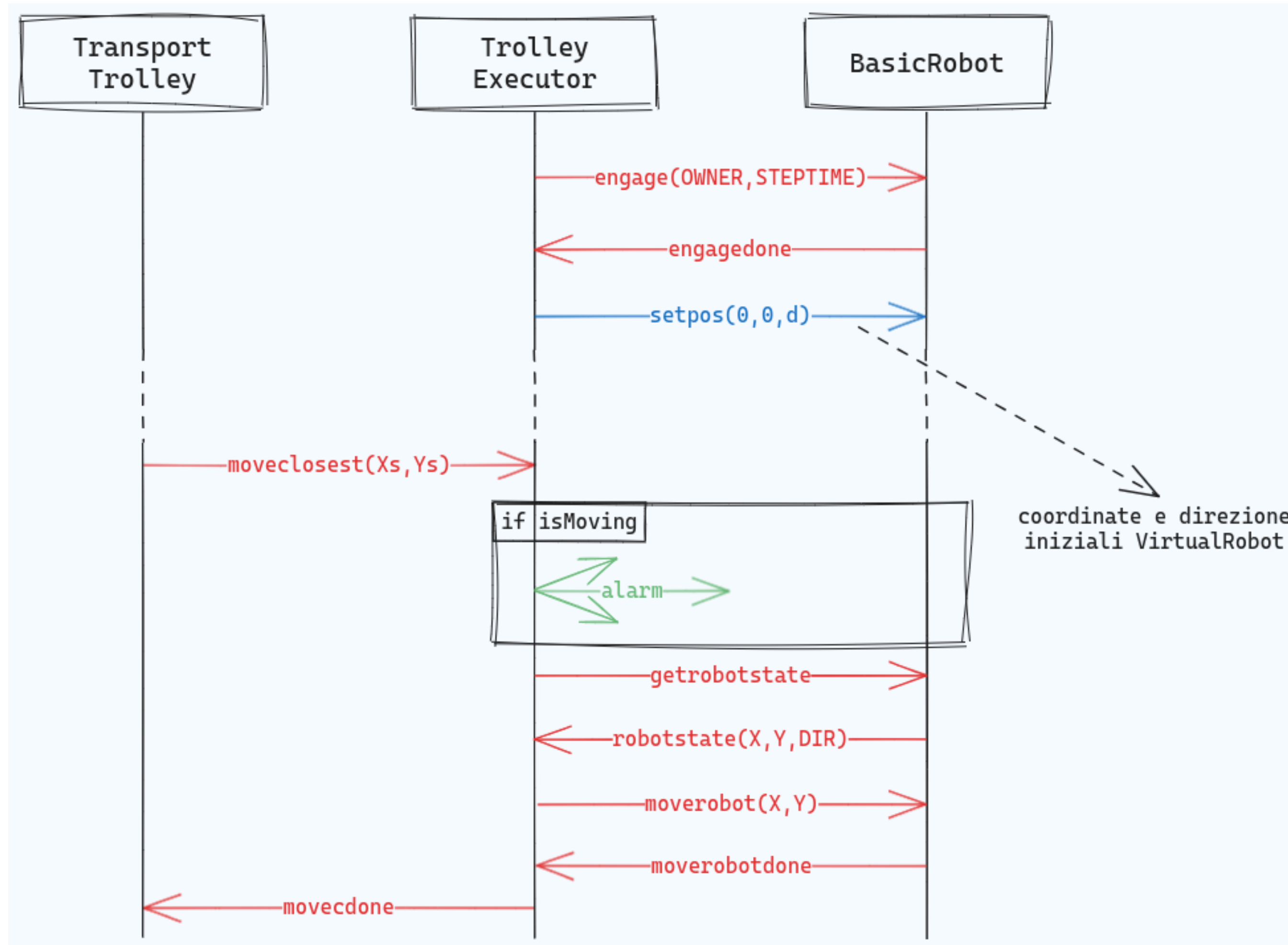
Sprint 1

TrolleyExecutor

Ottimizzazione
movimento del
robot con
moveclosest

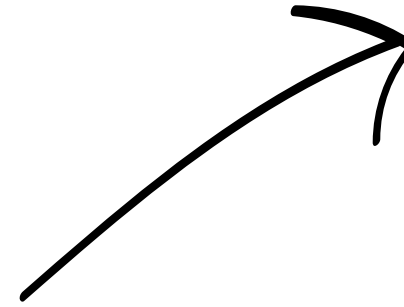


Il *TransportTrolley*
conosce i **landmarks**



Sprint 1 MapConfigurator

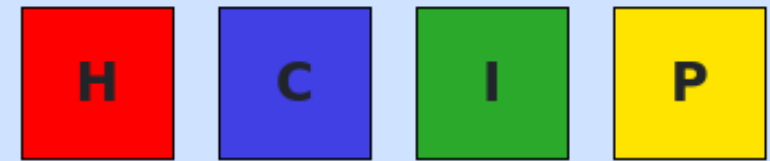
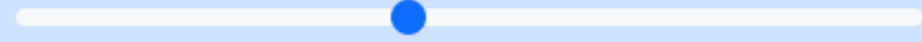
Viene generata un'istanza della classe **LandmarkCoordinates**



Height: 5



Width: 7



Save

Map name

Clear

H	1	1	1	1	1	1
1	0	0	0	C	C	1
1	0	0	0	C	C	1
1	0	0	0	P	P	1
I	I	I	1	1	1	1

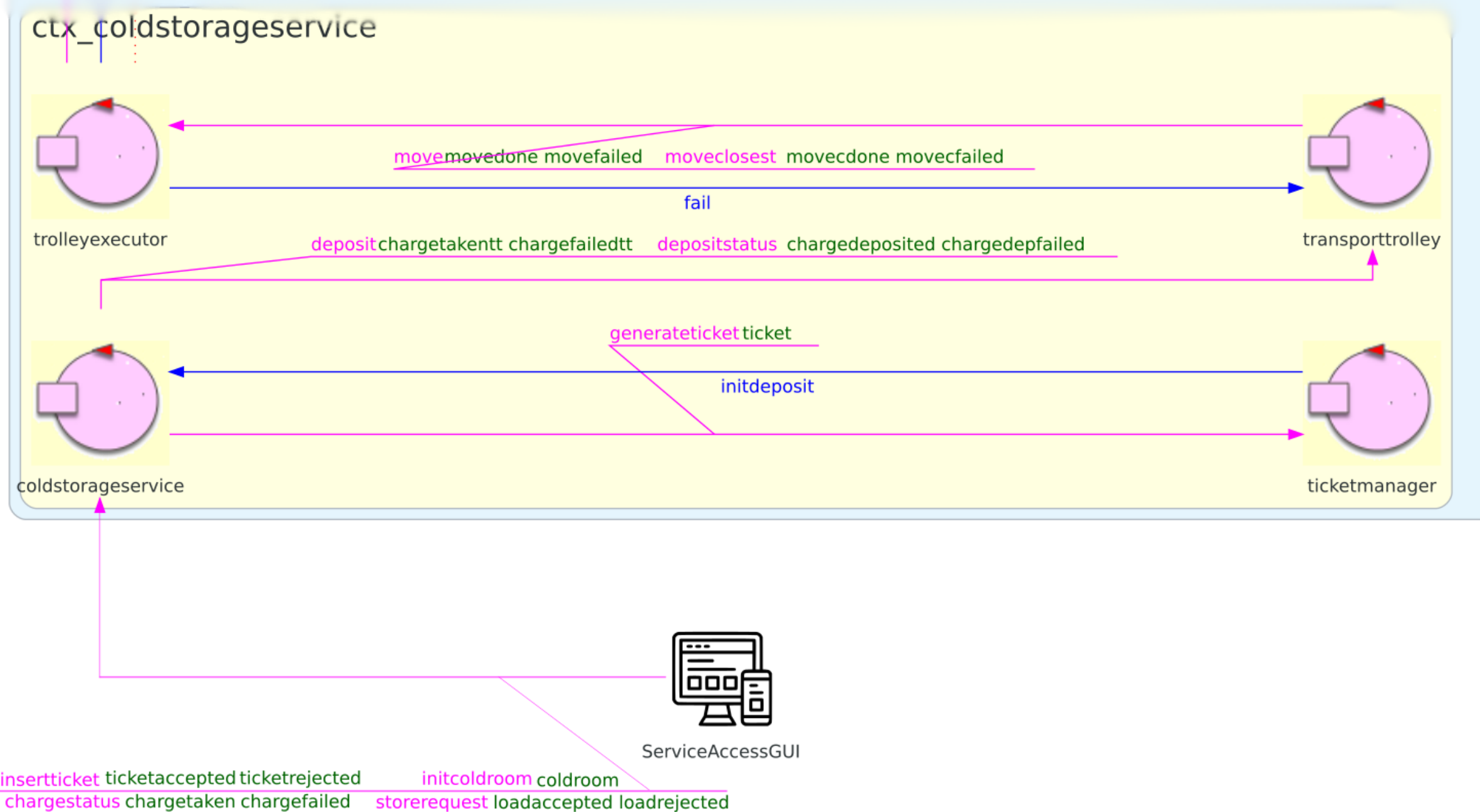
GUI intuitiva per
generare una
mappa
personalizzata della
ServiceArea

Sprint 2

ServiceAccessGUI

Gestione del *ticket*

Realizzazione della GUI
con *SpringBoot*

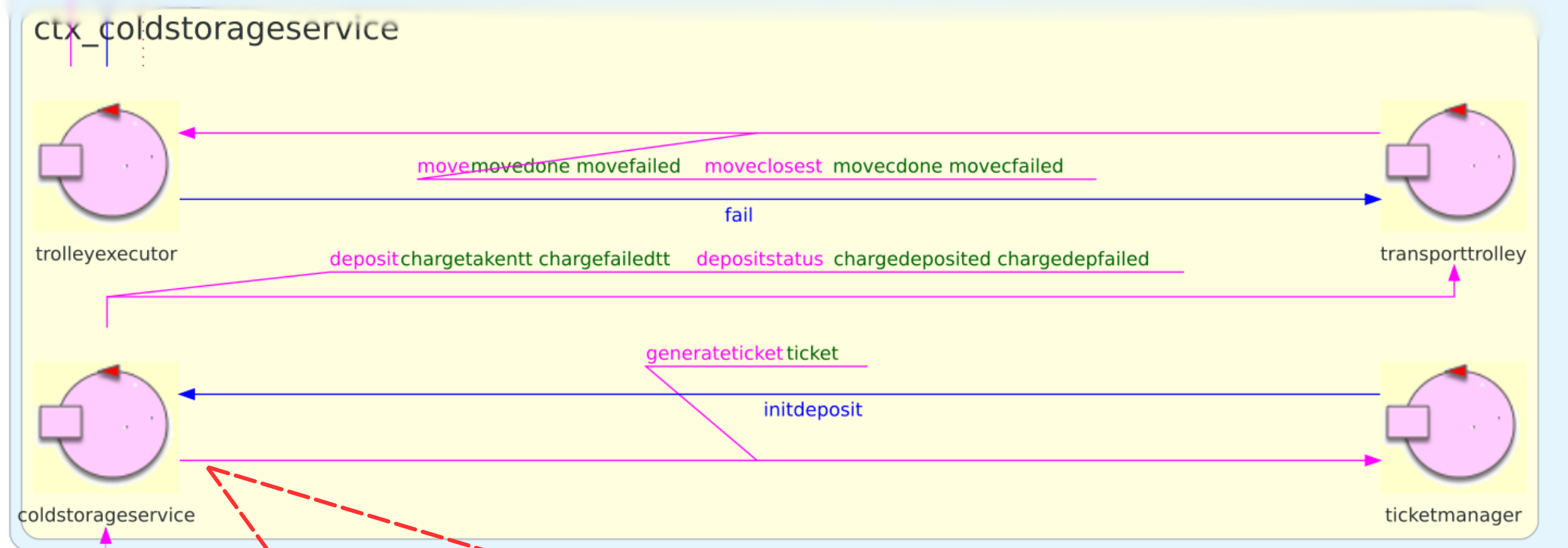


Sprint 2

ServiceAccessGUI

Gestione del *ticket*

Realizzazione della GUI
con *SpringBoot*



insertticket ticketaccepted ticketrejected
chargestatus chargedtaken chargefailed
initcoldroom coldroom
store request loadaccepted loadrejected

Osservabilità
tramite protocollo Coap

TICKETTIME: parametro configurabile
del servizio *ColdStorageService*



TICKETTIME: parametro configurabile
del servizio *ColdStorageService*



Generazione tramite ***CSPRNG***



Formato

t<kg>n<num_incrementale><2car_random>

Memorizzazione sotto forma di impronta
generata da una funzione ***hash***

TICKETTIME: parametro configurabile
del servizio *ColdStorageService*

Sprint 2

Gestione del ticket

Generazione tramite **CSPRNG**



Formato

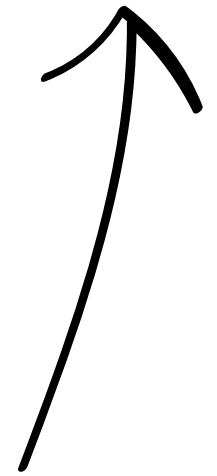
t<kg>n<num_incrementale><2car_random>

Memorizzazione sotto forma di impronta
generata da una funzione **hash**

TicketManager



Unico punto di
accesso al sistema



```
delegate "insertticket" to ticketmanager
```


ServiceAccessGUI

Deposit request simulation

Total weight in *ColdRoom*

Reserved: **0.0 KG**

Actually stored: **0.0 KG**

Welcome, please enter the **quantity of food** (kg) you need to deposit.
The load must be a number greater than 0.

Send request

PlainText

Once arrived at INDOOR, enter the **ticket code** received by the service.

Enter ticket

Sprint 2

Totale immagazzinato
e riservato nella
ColdRoom

Visualizzazione del ticket



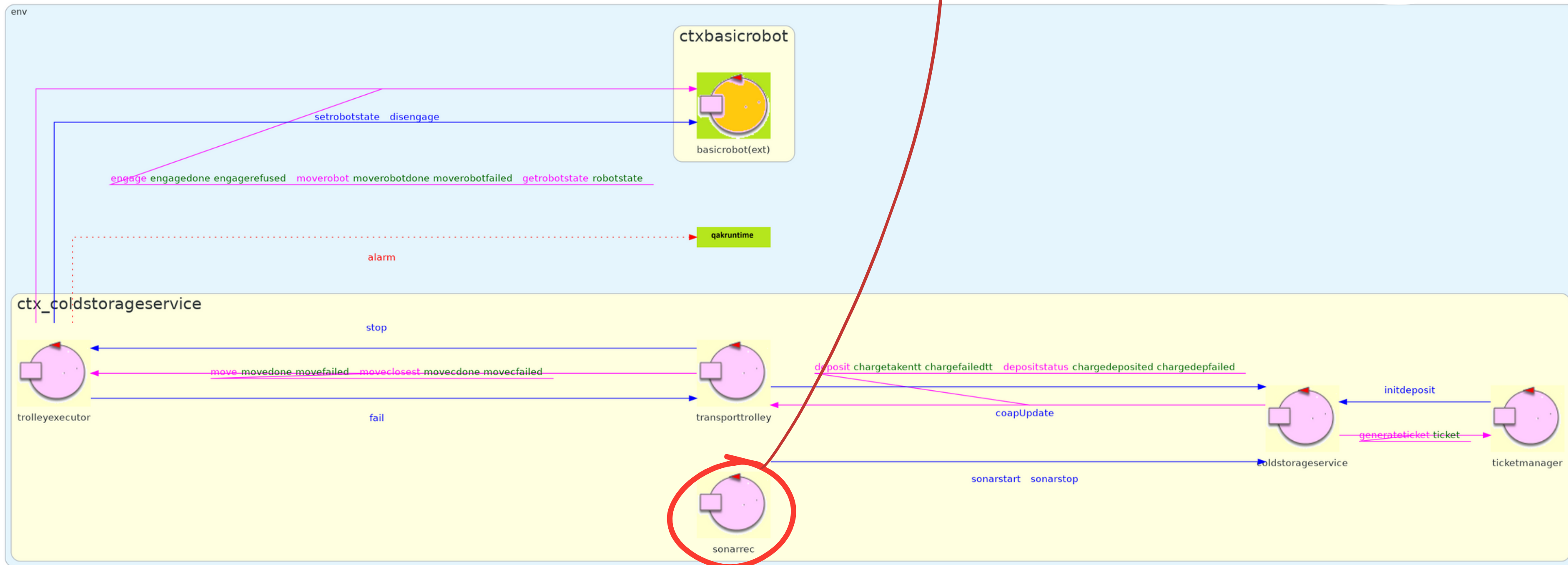
Download ***PDF***

Sprint 3

Sonar & Led

Nuovo attore
qak **sonarrec**

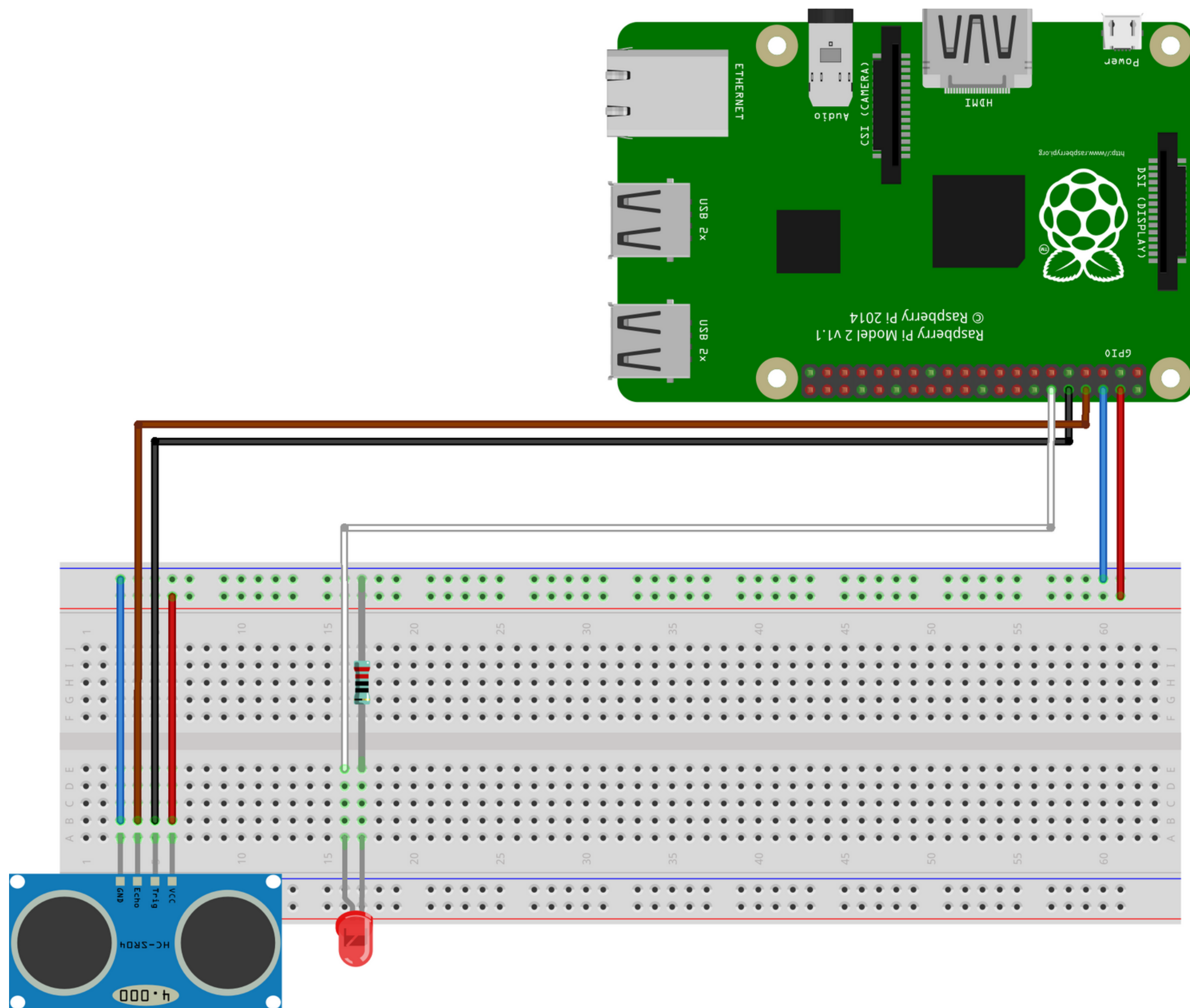
client **mqtt**



Sprint 3

RaspberryPi

Installazione led e sonar

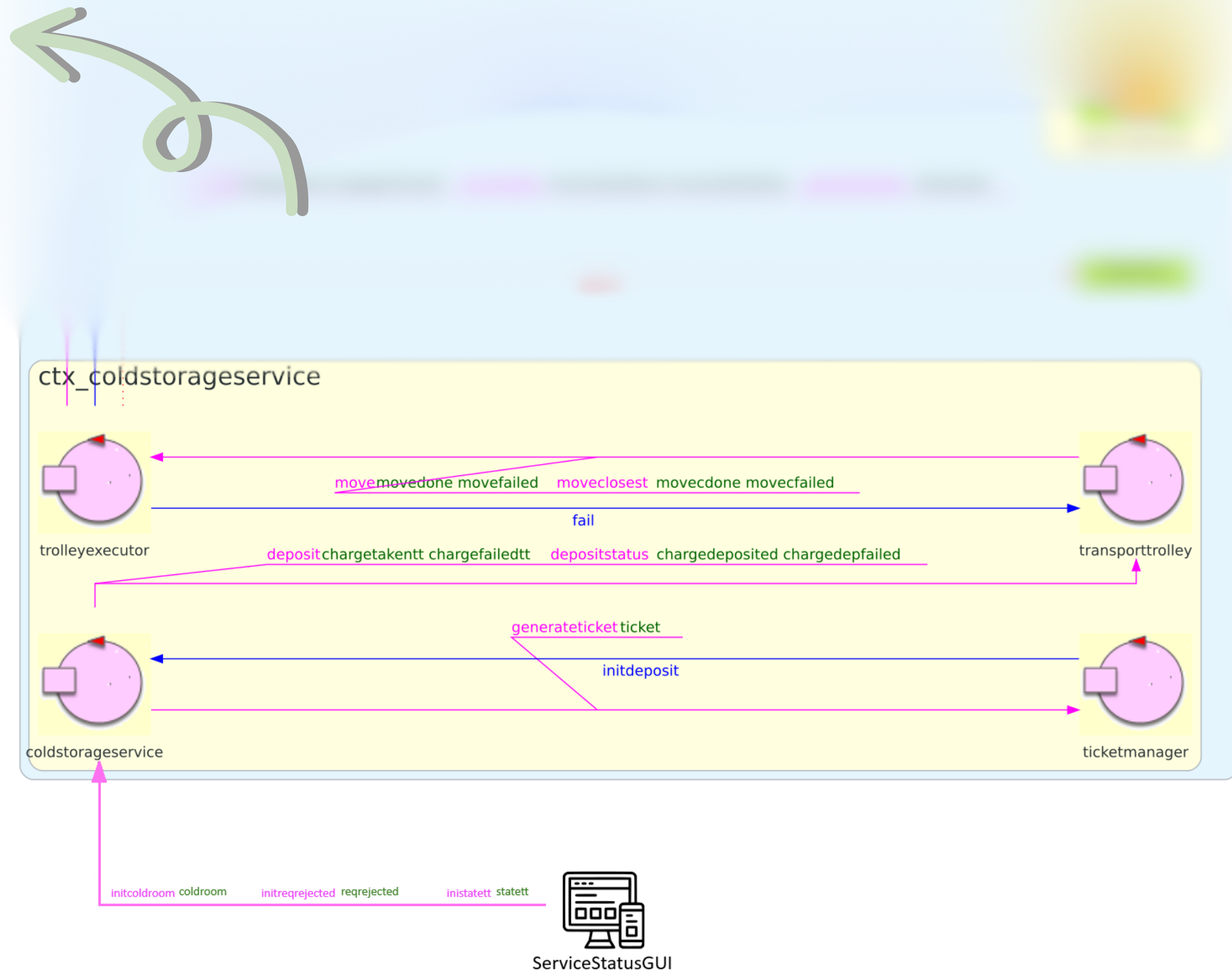


Sprint 4

ServiceStatusGUI

Due nuovi **eventi** e
interazioni di
inizializzazione

Osservabilità con Coap

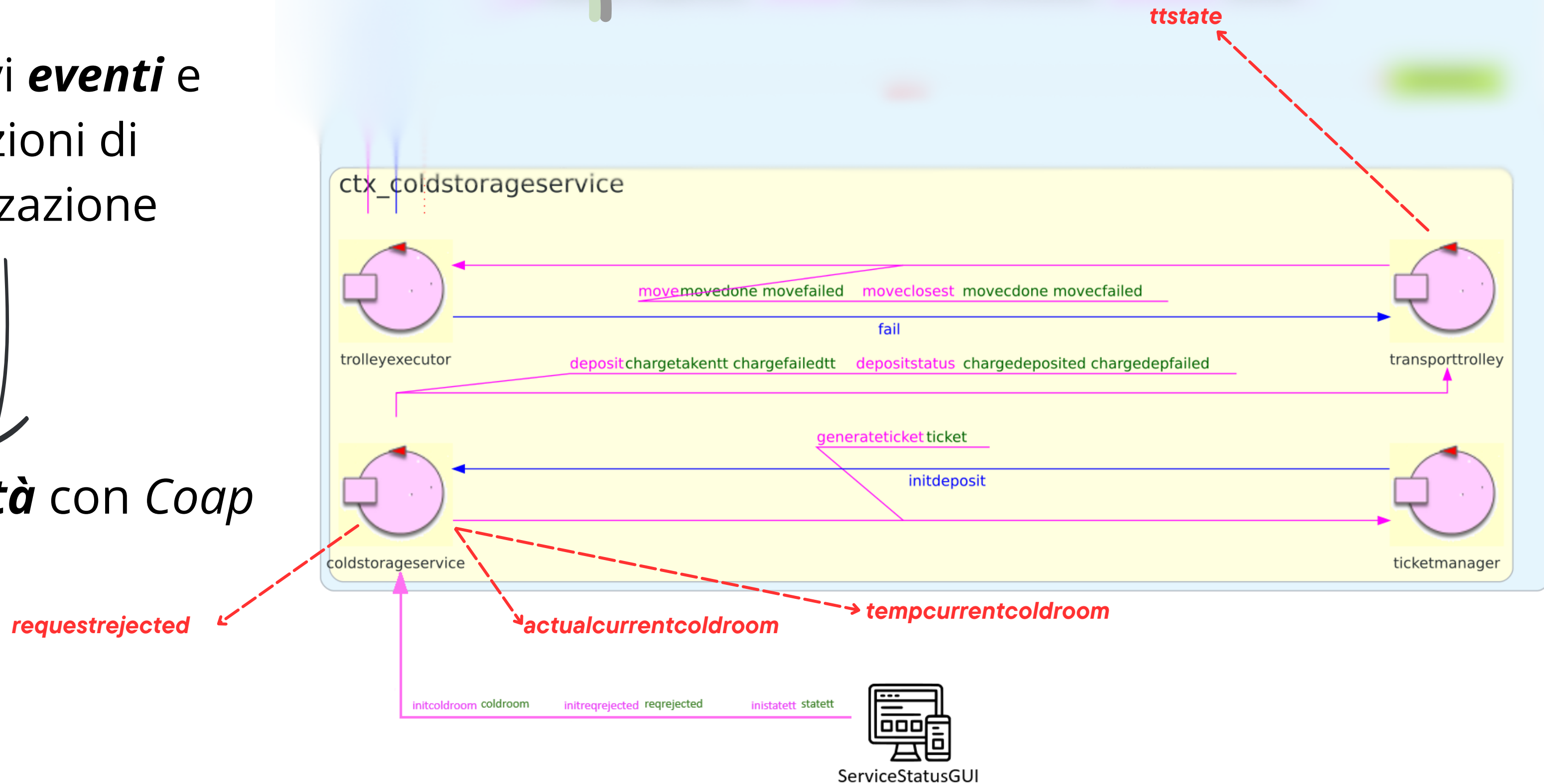


Sprint 4

ServiceStatusGUI

Due nuovi **eventi** e
interazioni di
inizializzazione

Osservabilità con Coap



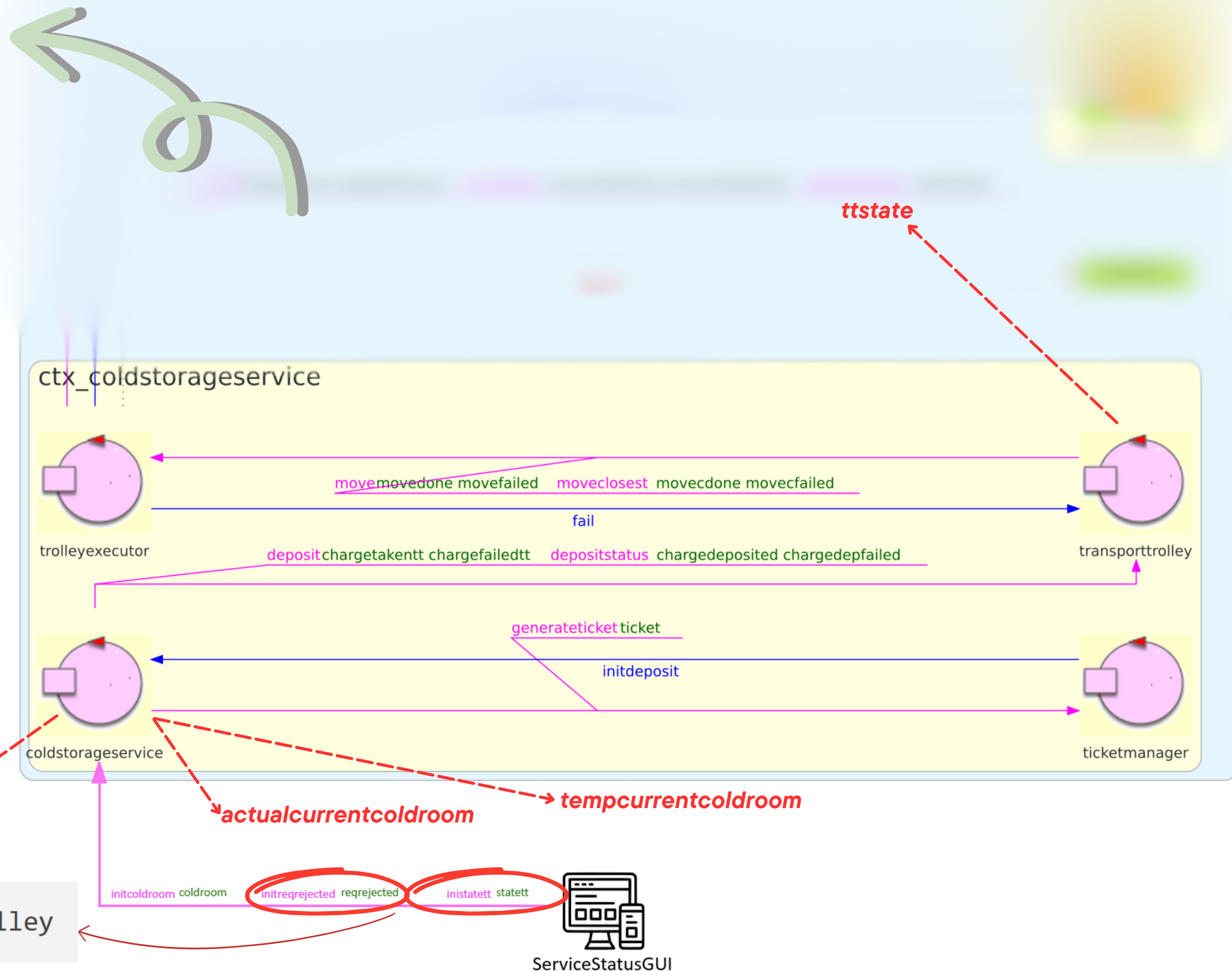
Sprint 4

ServiceStatusGUI

Due nuovi **eventi** e
interazioni di
inizializzazione

Osservabilità con Coap

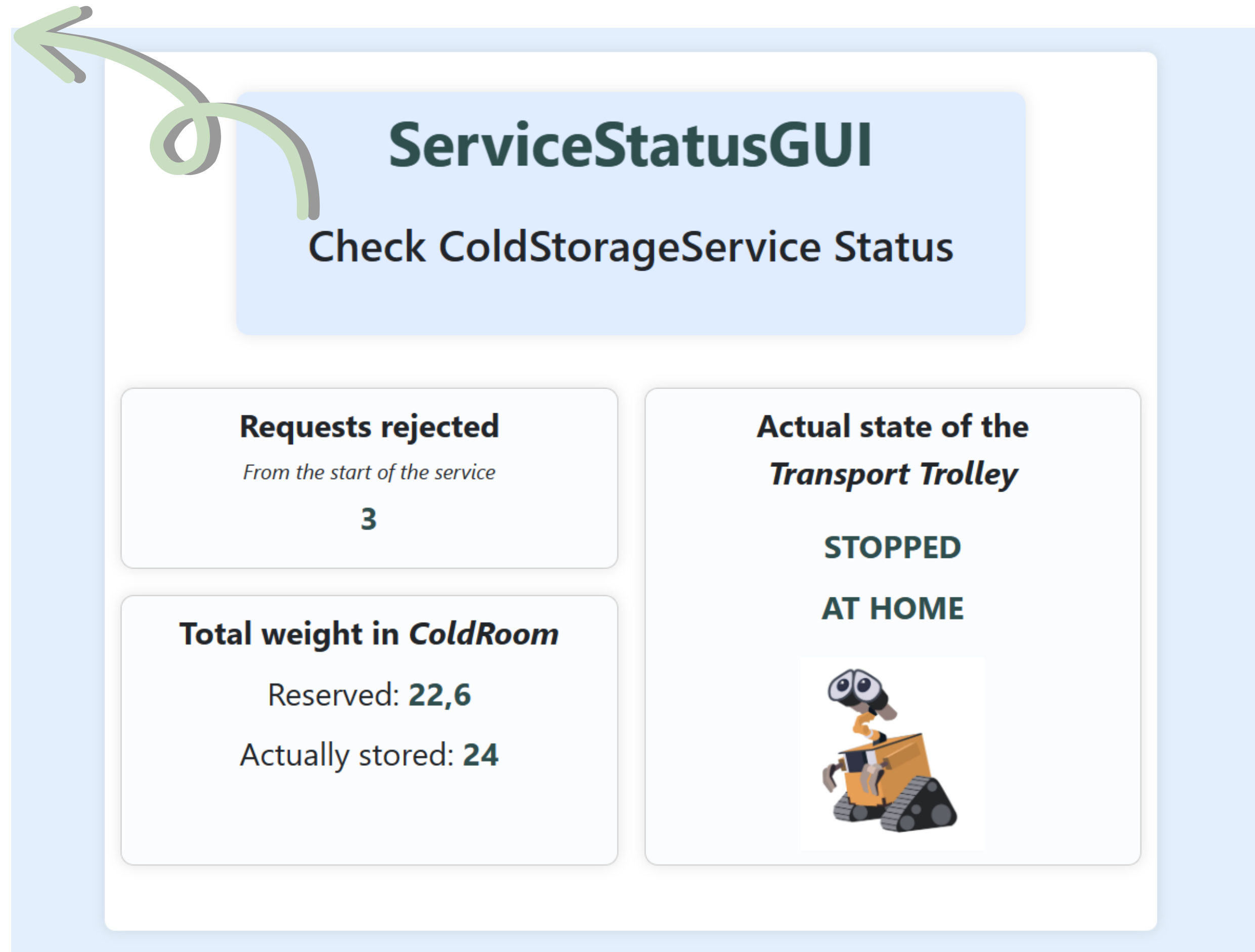
delegate "initstatett" to transportrolley



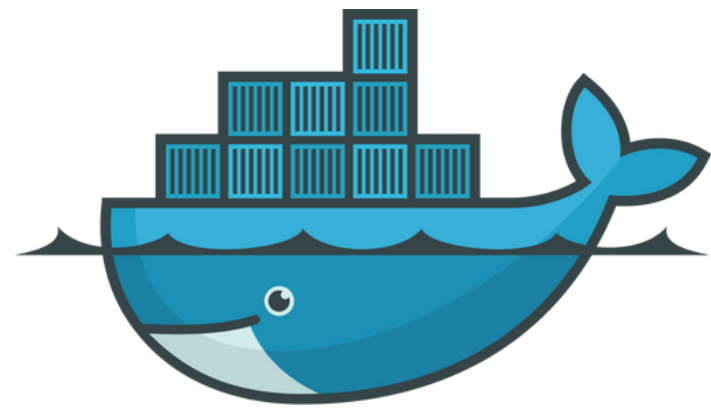
Sprint 4

Applicazione web in
sola visualizzazione

Feedback grafico
dello stato del
TransportTrolley



Deployment





































docker

docker compose -f coldstorageservice.yaml up -d

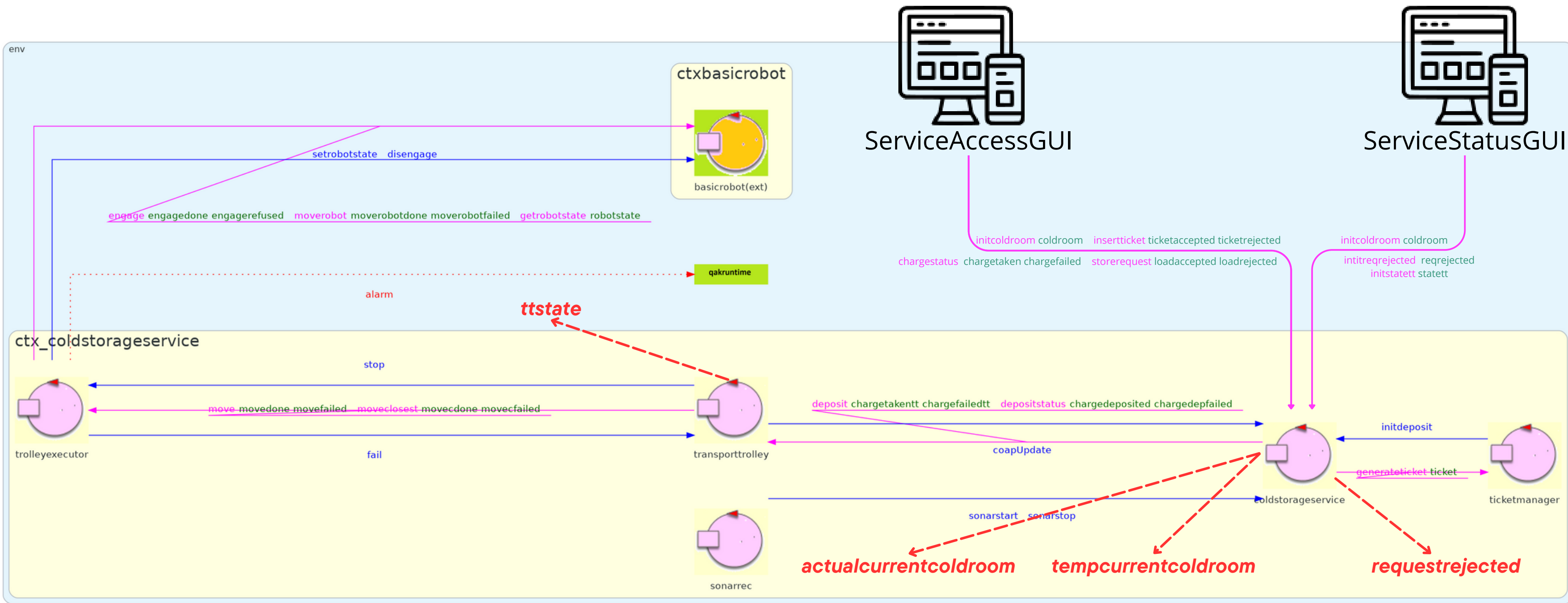
```
version: '3'
services:
  serviceaccessgui:
    image: riccardoob/serviceaccessgui:latest
    ports:
      - 8075:8075
    command: [ "bash", "./unibo.serviceaccessGUI" ]
  servicestatusgui:
    image: riccardoob/servicestatusgui:latest
    ports:
      - 8065:8065
  coldstorageservice:
    image: riccardoob/coldstorageservice23:latest
    ports:
      - 8021:8021
  wenv:
    image: riccardoob/virtualrobotdisi23:1.0
    ports:
      - 8090:8090
      - 8091:8091
  basicrobot23:
    image: riccardoob/basicrobot23:2.0
    ports:
      - 8020:8020/tcp
      - 8020:8020/udp
networks:
  shared:
    driver: bridge
```

Deployment

Visualizzazione e gestione
immagini da **Docker Desktop**

Name		Image	Status	CPU (%)	Port(s)	Last started	Actions		
▼	 <u>docker</u>		Running (5/5)	N/A		1 second ago			
	 <u>wenv-1</u> 3133129fa17f 	<u>riccardoob/virtualrobotdisi23:1.0</u>	Running	N/A	<u>8090:8090</u>  <u>Show all ports (2)</u>	1 second ago			
	 <u>basicrobot23-1</u> 0eaa8fd93dfb 	<u>riccardoob/basicrobot23:2.0</u>	Running	N/A	<u>8020:8020</u>  <u>Show all ports (2)</u>	1 second ago			
	 <u>coldstorageservice-1</u> b040344da994 	<u>riccardoob/coldstorageservice23:latest</u>	Running	N/A	<u>8021:8021</u> 	1 second ago			
	 <u>serviceaccessgui-1</u> fa471f15ced1 	<u>riccardoob/serviceaccessgui:latest</u>	Running	N/A	<u>8075:8075</u> 	1 second ago			
	 <u>servicestatusgui-1</u> 75f94f21be73 	<u>riccardoob/servicestatusgui:latest</u>	Running	N/A	<u>8065:8065</u> 	1 second ago			

“Architettura finale



```
File Edit View Search Terminal Help
docker - service accessgui-1 | CoapObserver changed: ttstate(stopped, home)
docker - service accessgui-1 | CoapObserver changed: ttstate(stopped, home)
docker - service accessgui-1 | 
docker - service accessgui-1 | 
docker - service accessgui-1 | 
docker - service accessgui-1 | 
2023-12-21 11:49:44.078 INFO 1 --- [nio-8075-exec-1] o.a.c.c.C.[Tomcat]
.{localhost}.[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
docker - service accessgui-1 | 2023-12-21 11:49:44.078 INFO 1 --- [nio-8075-exec-1] o.s.web.servlet.DispatcherServlet
: Initializing Servlet 'dispatcherServlet'
docker - service accessgui-1 | 2023-12-21 11:49:44.079 INFO 1 --- [nio-8075-exec-1] o.s.web.servlet.DispatcherServlet
: Completed initialization in 1 ms
docker - service accessgui-1 | 
docker - coldstoragegui-1 | %W ActorBasic caproute4/Created 16-cpus confined=false
ThreadPakCpuPool: 11 numOfThreads=35
docker - coldstoragegui-1 | coldstoragegui | addValueToRequestMap initcoldroomcaproute4, list=[
InitColdRoomCapRoute4=msg{initcoldroom,request,caproute4,coldstoragegui,initcoldroom(arg),30}]
pageId=1
docker - coldstoragegui-1 | findStoreWithRequest initcoldroom key=initcoldroomcaproute4 sender=null
docker - coldstoragegui-1 | 
docker - service accessgui-1 | TcpConnection sendInitColdRoom ; answer msg{coldroom,reply,coldstorage
service,coldstoragegui,coldroom(1,0,0)},11
docker - service accessgui-1 | 
```

