

### SOEN 331 Assignment 3

Dmitry Svoiski - 6893570

Matthew Beauchemin - 6760953

#### lockdown specification

$Q = \{ \text{prep\_vpurge}, \text{alt\_temp}, \text{alt\_psi}, \text{risk\_assess}, \text{safe\_status} \}$

$q_0 = \text{prep\_vpurge}$

$\Sigma_1 = \{ \text{initiate\_purge}, \text{tcyc\_comp}, \text{psicyc\_comp} \}$

$\Sigma_2 = \{ \text{lock\_doors}, \text{unlock\_doors} \}$

$\Lambda = \{$

$\text{prep\_vpurge} \xrightarrow[\text{lock\_doors;}]{} \text{alt\_temp},$

$\text{prep\_vpurge} \xrightarrow[\text{lock\_doors;}]{} \text{alt\_psi},$

$\text{alt\_temp} \xrightarrow{\text{tcyc\_comp}} \text{risk\_assess},$

$\text{alt\_psi} \xrightarrow{\text{psicyc\_comp}} \text{risk\_assess},$

$\text{risk\_assess} \xrightarrow{[\text{risk} > 1\%]} \text{prep\_vpurge},$

$\text{risk\_assess} \xrightarrow[\text{unlock\_doors}]{} \text{safe\_status}$

$\}$

$V = \text{risk}$