# Content

[Content 0](#_Toc55011755)

[Axis 0](#_Toc55011756)

[Semicircular track 0](#_Toc55011757)

[Cell membership to a grid 1](#_Toc55011758)

[Causal loop pop-growth 1](#_Toc55011759)

[PSA discussion 2](#_Toc55011760)

[Root finding line+circle 2](#_Toc55011761)

[Green port causal loop 3](#_Toc55011762)

[Mechanical potential energy 4](#_Toc55011763)

[Notes 5](#_Toc55011764)

[Version 5](#_Toc55011765)

# Axis

*x*

*y*

*z*

*x*

*z*

*y*

*x*

*y*

*z*

*x*

*z*

*y*

*g*





# Semicircular track

*A*

*B*

*C*

*F*

*O*

*D*

*E*

*vA*

*vB*

*μk* = 0

*μk* = 0

*vF*

*vD*

*2R*

*vE*

*vC*



*x*

*y*

*z*

# Cell membership to a grid

white: mature, red: new

# Causal loop pop-growth

*P*

*B*

*D*

+

+

–

+

*R*

*B*

# PSA discussion

*θ*

*θ*

# Root finding line+circle

*C*

*A*

*B*

*O*

*t*

*t* + 2Δ*t*

*t* + Δ*t*

*t* – Δ*t*

*v*Δ*t*



, , , ,  
, , ,  
, , , or the right side

# Green port causal loop

Port-driven GDP

Energy Occupation

Water Occupation

Waste Discharge

Urban GDP

+

Environmental Quality

Resources Loss

Health Risk

+

+

–

+

+

–

–

–

Green Technology

–

–

–

+

Trade

+

Port Demand

Port Pressure

+

+

+

Port Cargo Troughput

+

Port Investment

Shoreline Occupation

+

–

+

Port Cargo Troughput Capacity

+

+

–

Port Revenue

Port Profit

+

+

+

+

Population

Death

Birth

–

+

In-Migration

+

+

+

–

Life Quality

–

–

Intrastate Industry

Interstate Industry

Interstate Infrastructure

+

+

Intrastate Infrastructure

+

+

–

–

Investment

+

+

+

+

Carrying Capacity

+

# Mechanical potential energy



*y*

*m*

*m*1

*m*2

*l*

*l*

*l*



*y* + *y*0

–*y* + *y*0

*x*

*y*

*z*

*x*

*y*

*z*



*θ*

*y*

*x*

*y*

*z*

*s*



*x*

*y*

*z*

*m*1

*m*2

*l*1

*l*2

*l*1

*l*2

*θ*

*y*0 + *l*1 sin *θ*

*y*0 – *l*2 sin *θ*

*x*

*y*

*z*



*y*0 + *y*

*y*0 – *y*

*k*

*x*

*y*

*z*



Δ*h*

Δ*V*

# Notes

* 130% as for jekyll blog with MathJax

# Version

20201031.0