



# XTblock's Distributed AI Platform

3rd Feb 2020

<https://xtblock.io>

## Q: What is dAI for?

## A: Collaborative Decision Making

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This theme centres on advancing the state of the art in collaborative AI and the following are the three areas of interest:

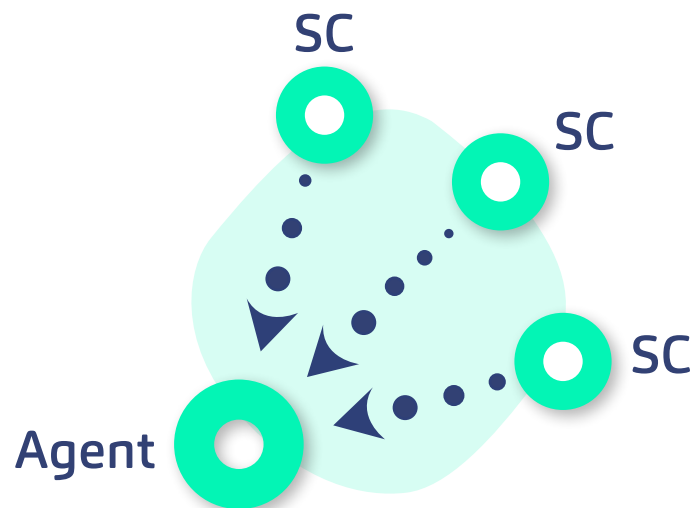
- i. Human Modelling for Collaboration – Intentions; Goals; and Behaviours
- ii. Complex Decision Making Under Uncertainty
- iii. Communications and Interaction – Collaboration with Sparse Information/Communication; Group Decision Making with Self Interested Agents or by Aggregated Opinions

“Ref: AI Singapore”

# AI Algorithms based on Smart Contracts



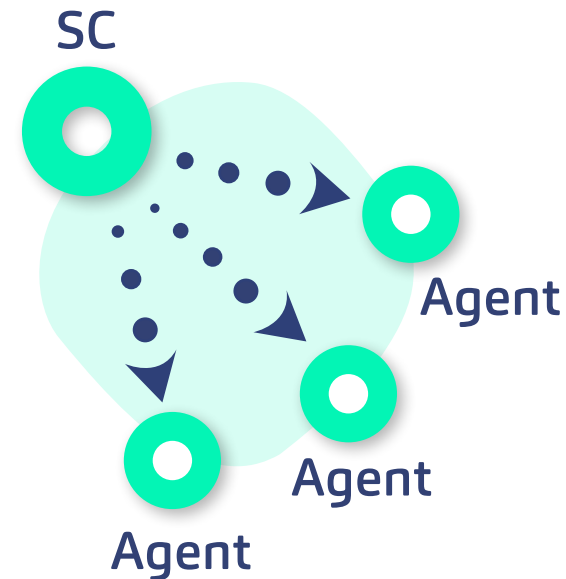
# Collaborative Decision Making: 3 Models



MANY TO ONE

DPS

1



ONE TO MANY

MAS

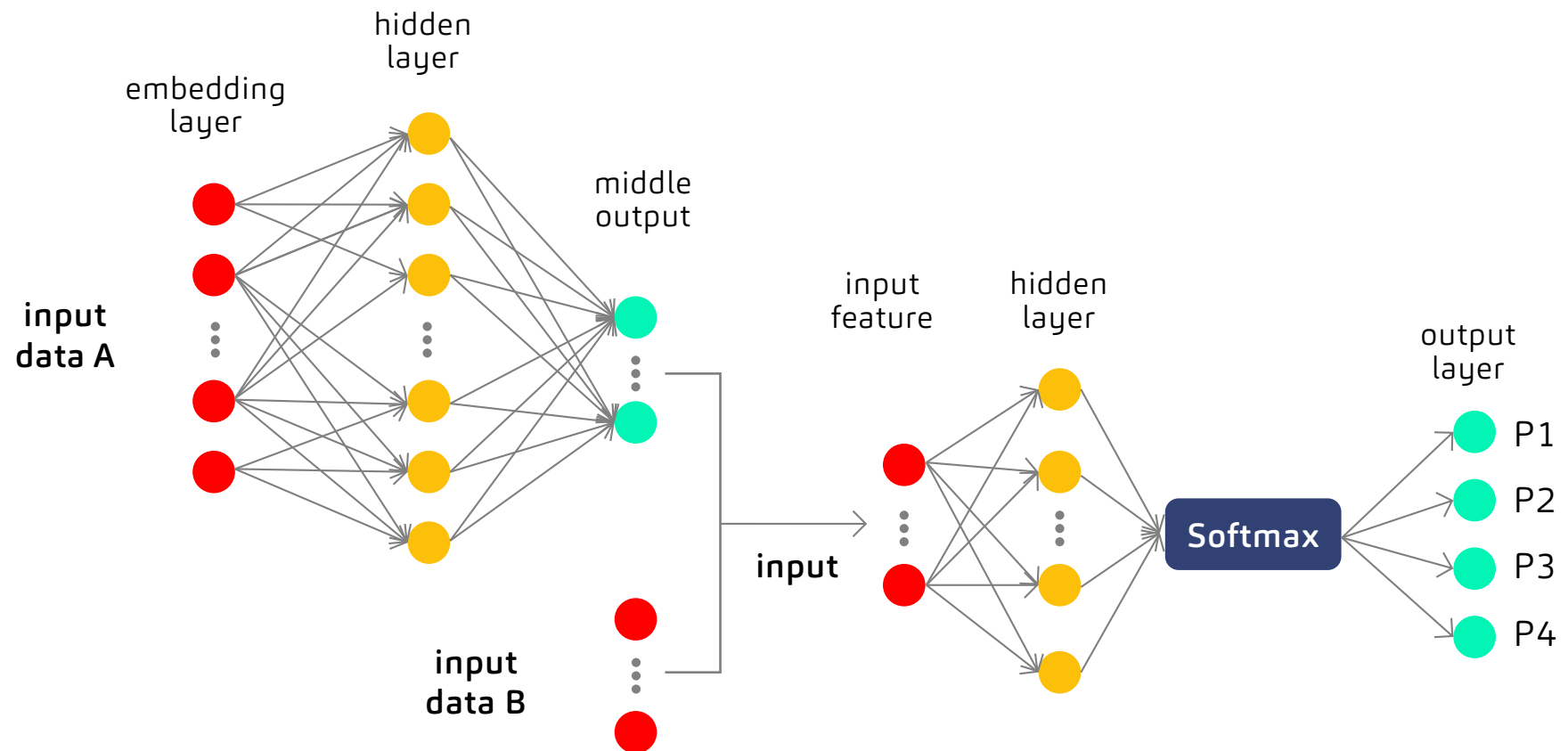
2

+

3

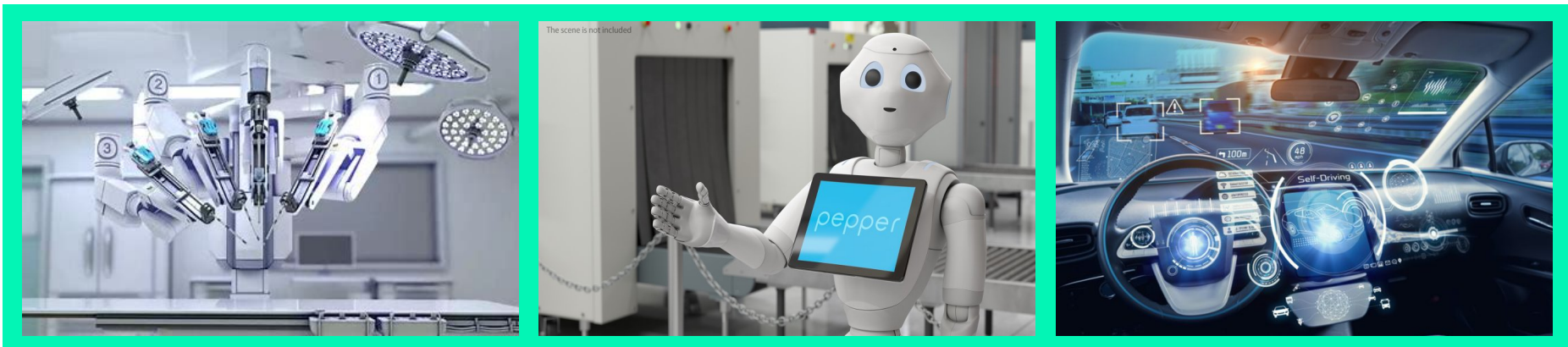
# AGI based on Smart Contracts Network

## #AGI-SC



# #AGI-VM: Approached WA

WebAssembly is crossing over from the Web to the server-side and brings the potential to revolutionise modern systems' design and implementation.





# Simple interface to create Neural Network SC

## 1 - Create layers

### Layers code

```
model.AddDenseInputLayer(I0);

let I1 = new nnb.DenseHiddenLayerDescriptor(64, "sigmoid");
I1.SetKeepProb(1.0);
I1.SetWeightType("xavier_uniform");
model.AddDenseHiddenLayer(I1);

let I2 = new nnb.DenseOutputLayerDescriptor(10, "softmax");
I2.SetWeightType("lecun_uniform");
model.AddDenseOutputLayer(I2);
```

## 2 - Select model parameters

### A - Model configuration

#### Training batch

#### Testing batch

#### Prediction batch

#### Loss function

#### Training batch in memory

#### Testing batch in memory

### B - Training parameters

#### Epoch

#### Learning rate

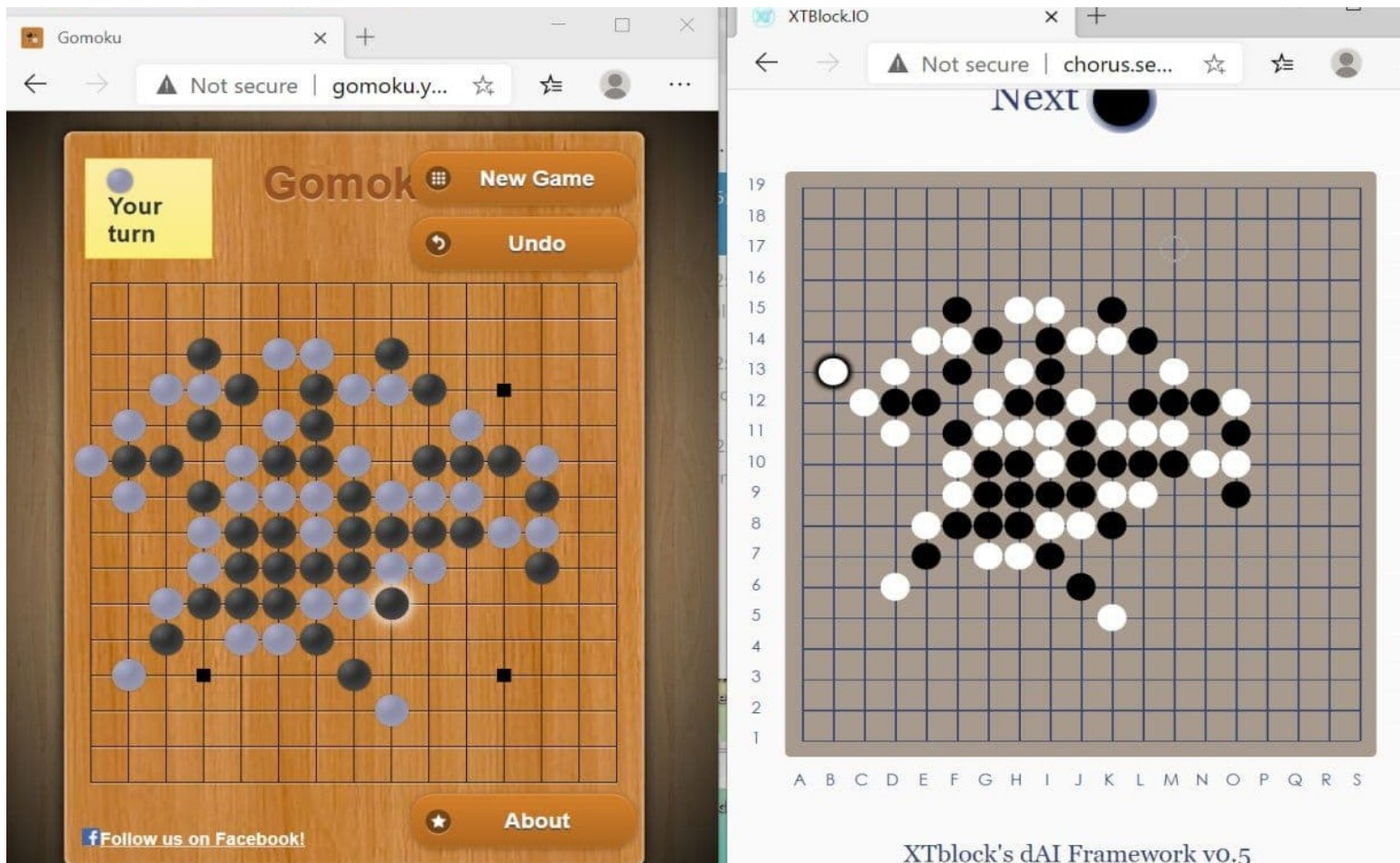
#### L1 Regularizer

#### L2 Regularizer



# Prototyping with XTblock's dAI Gomoku

## #DPS - Branching Factor: 250





# Next: Prototype with XTblock's dAI Chess

## #MAS - Branching Factor: 35



Chess



Next ☐

New Game

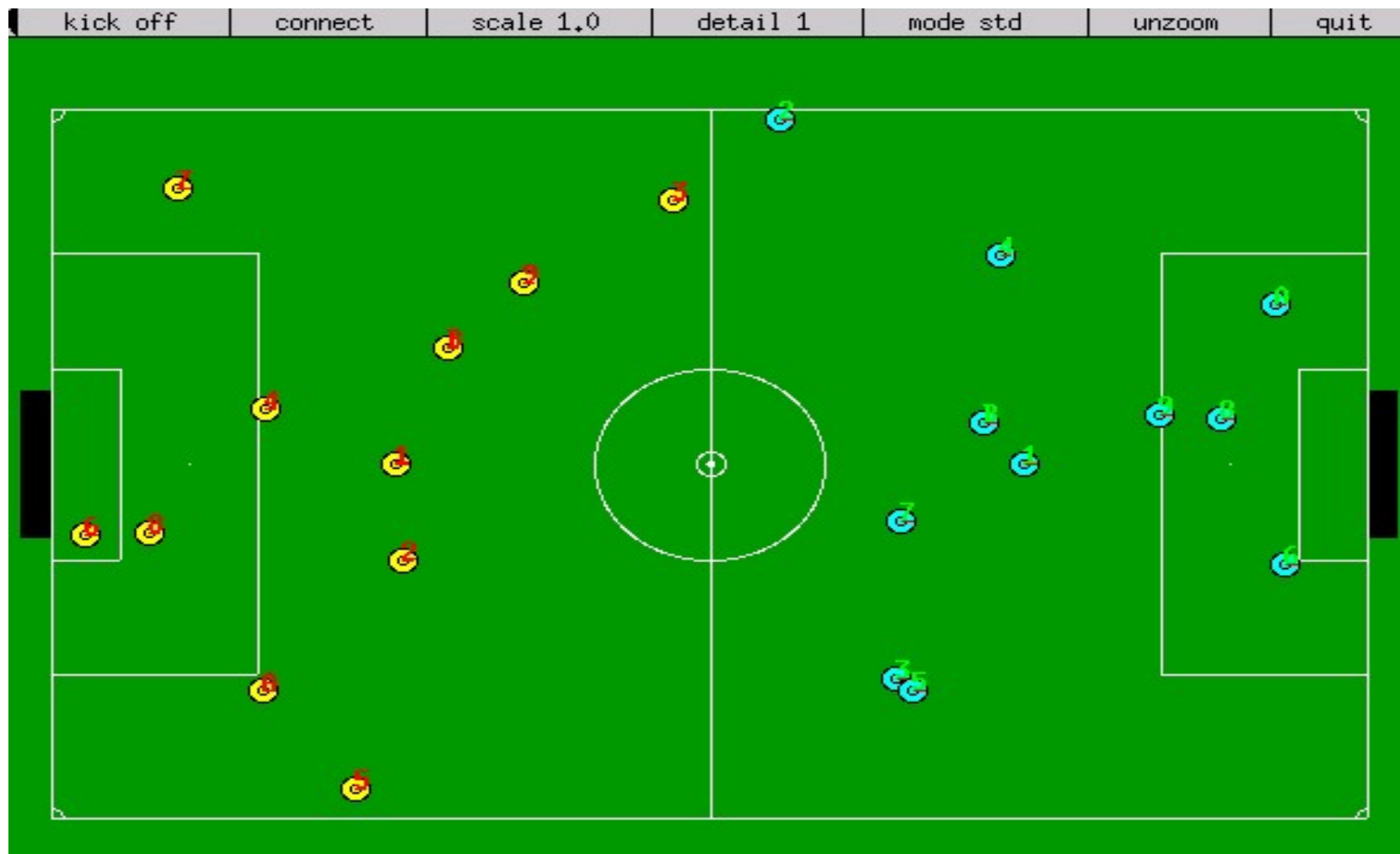
Select your colour



Start Game

# Next: Prototype with XTblock's dAI Soccer

## #Complex #MAS





# Thank you!

<https://xtblock.io>