

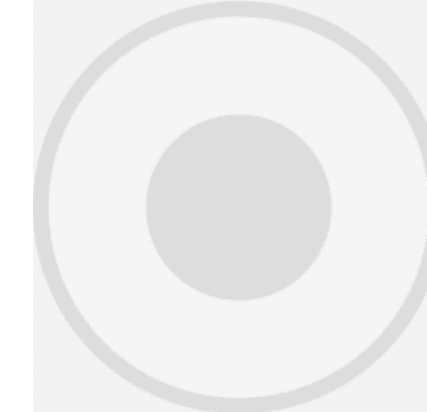
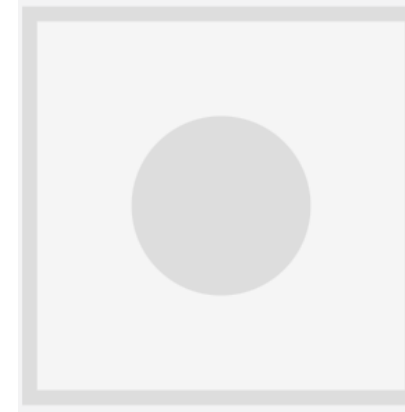




# 3D Modelling Function---Workflow Introduction



# 3D Modeling Function Workflow

Unit	cm					
Cavity Side Length	6.3	cm	Cavity Height	7	cm	
Resonator Radius	0.9	cm	Resonator Height	5.8	cm	
R <sub>s</sub> Radius Range	0.7	1.26	R <sub>s</sub> Height Range	5.4	6.3	
Bowl Radius	0.85	cm	Bowl Depth	0.8	cm	
Tuning Screw Radius	M2	0.25	cm	Tuning Screw Depth	0.9	cm
Frequency	1	GHz	Est. Resonator h	5.25	cm	
Surface Material	Silver	Conductivity	6.1	x10 <sup>7</sup> S/m	<b>Apply</b>	
<input checked="" type="radio"/> Square <input type="radio"/> Round <input type="radio"/> Hexagon						



- Supports various cavity resonator with different shapes;
- Frequency & Q curve analysis;
- Practical design consideration: Ex: Draft angle & Edge rounding;
- Dimension synthesis;

**Cavity  
Analysis**

**Coupling  
Schemes**

**I/O  
Schemes**

**Fully 3D  
modelling**

# 3D Modeling Function Workflow

**1 Coupling Structure**      **2 Modeling & Simulation**

**Key Variables**

Iris Width	3.15	cm	Coupling Screw Radius	0.25	cm
Iris Thickness	0.63	cm	Coupling Screw Depth	0.875	cm
Iris Depth	2.33	cm			

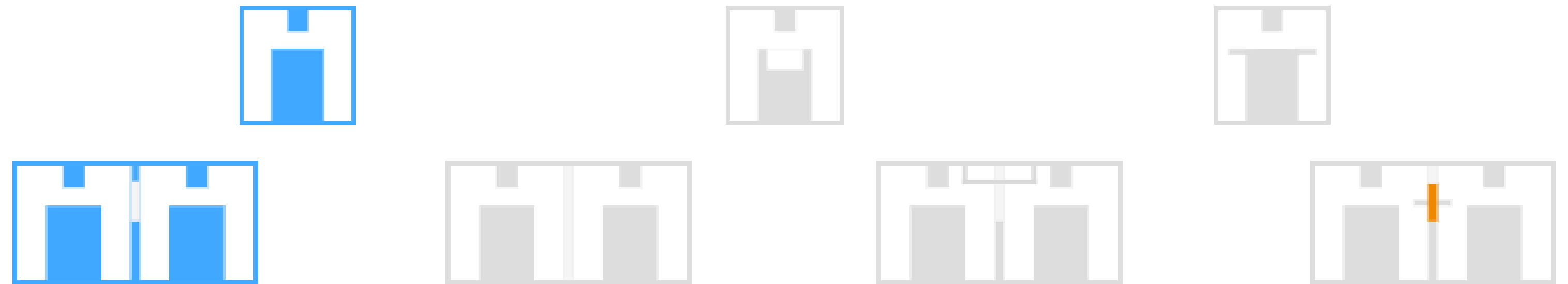
**Optional Variables**

Shift	0	cm
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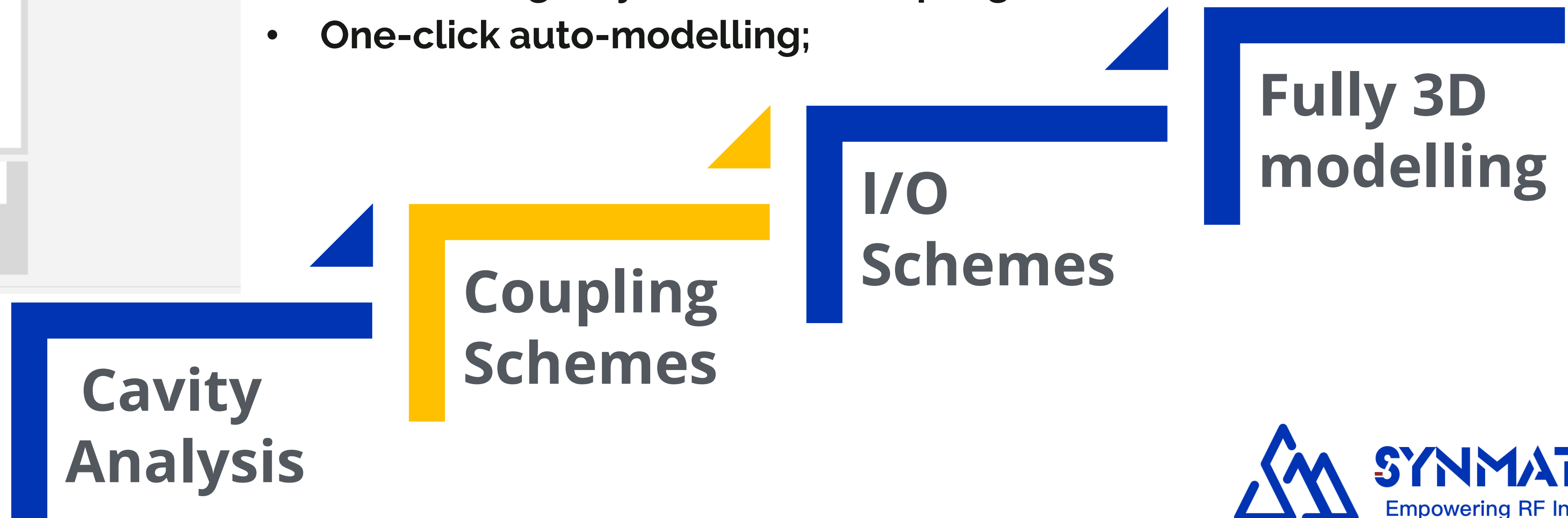
The cavity geometrical parameters will be carried over from the single cavity design page. User is not allowed to change it in the Input/output coupling scheme page.

**Next Step**

## Ex: Coaxial Cavity



- Supports 4 major coupling schemes up to **45** different geometries ;
- Self-defined key variables parametric analysis;
- Curve fitting way to find the coupling coefficients;
- One-click auto-modelling;




# 3D Modeling Function Workflow

1 Coupling Structure      2 Modeling & Simulation

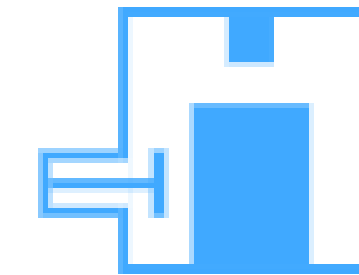
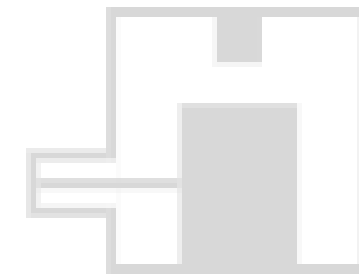
Port Height	2.625	cm	Port Insert Length	1.125	cm						
Disk Radius	0.381	cm	Disk Thickness	0.1	cm						
Connector Type	SMA	▼	R In	0.127	cm	R Out	0.42	cm	Port L	2.6	cm

The cavity geometrical parameters will be carried over from the single cavity design page. User is not allowed to change it in the Input/output coupling scheme page.

Next Step



## Ex: Coaxial Cavity



- Supports 3 major coupling schemes up to 9 different geometries ;
- One-click auto-modelling;
- Self-defined key variables parametric analysis;

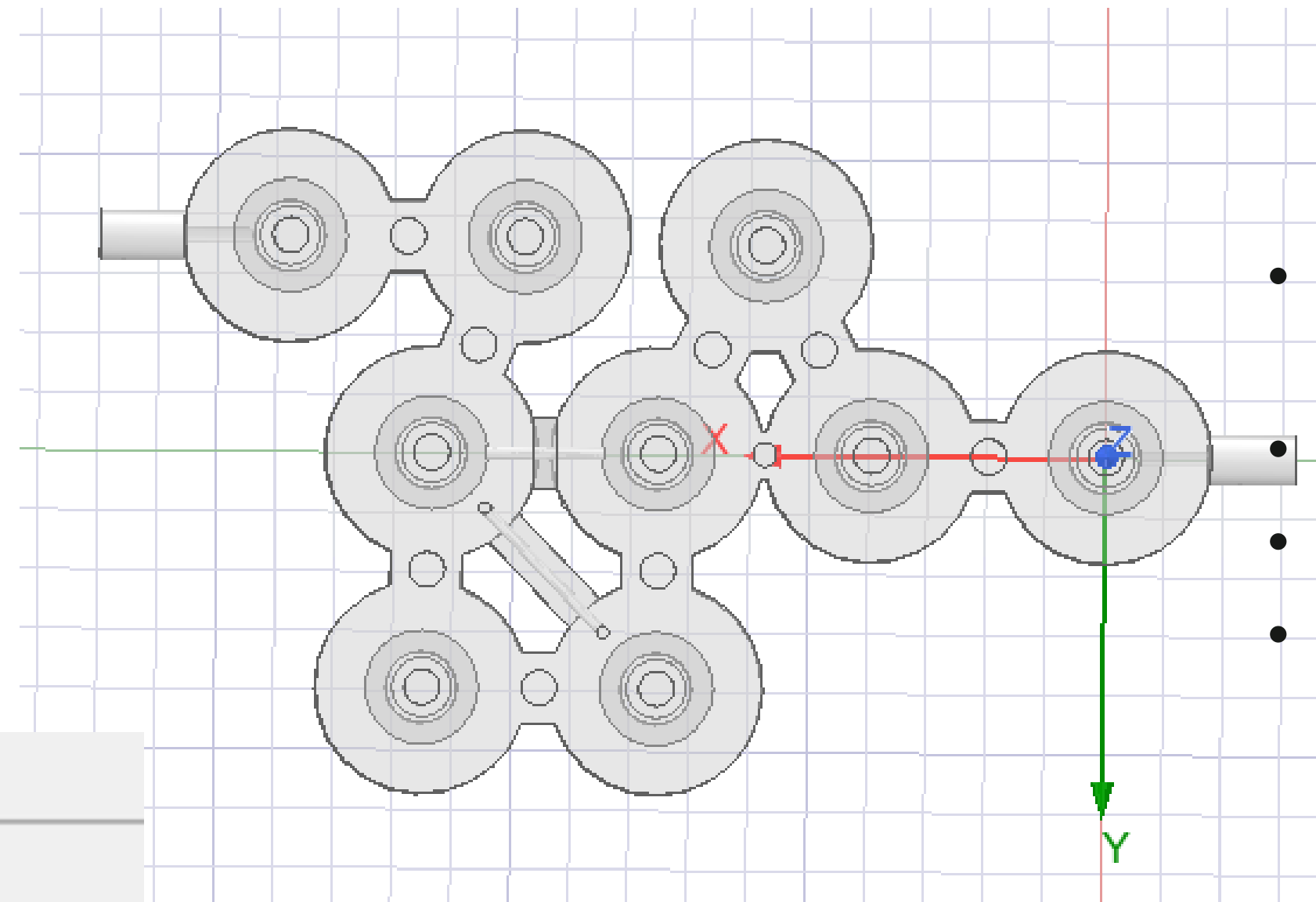
Cavity  
Analysis

Coupling  
Schemes

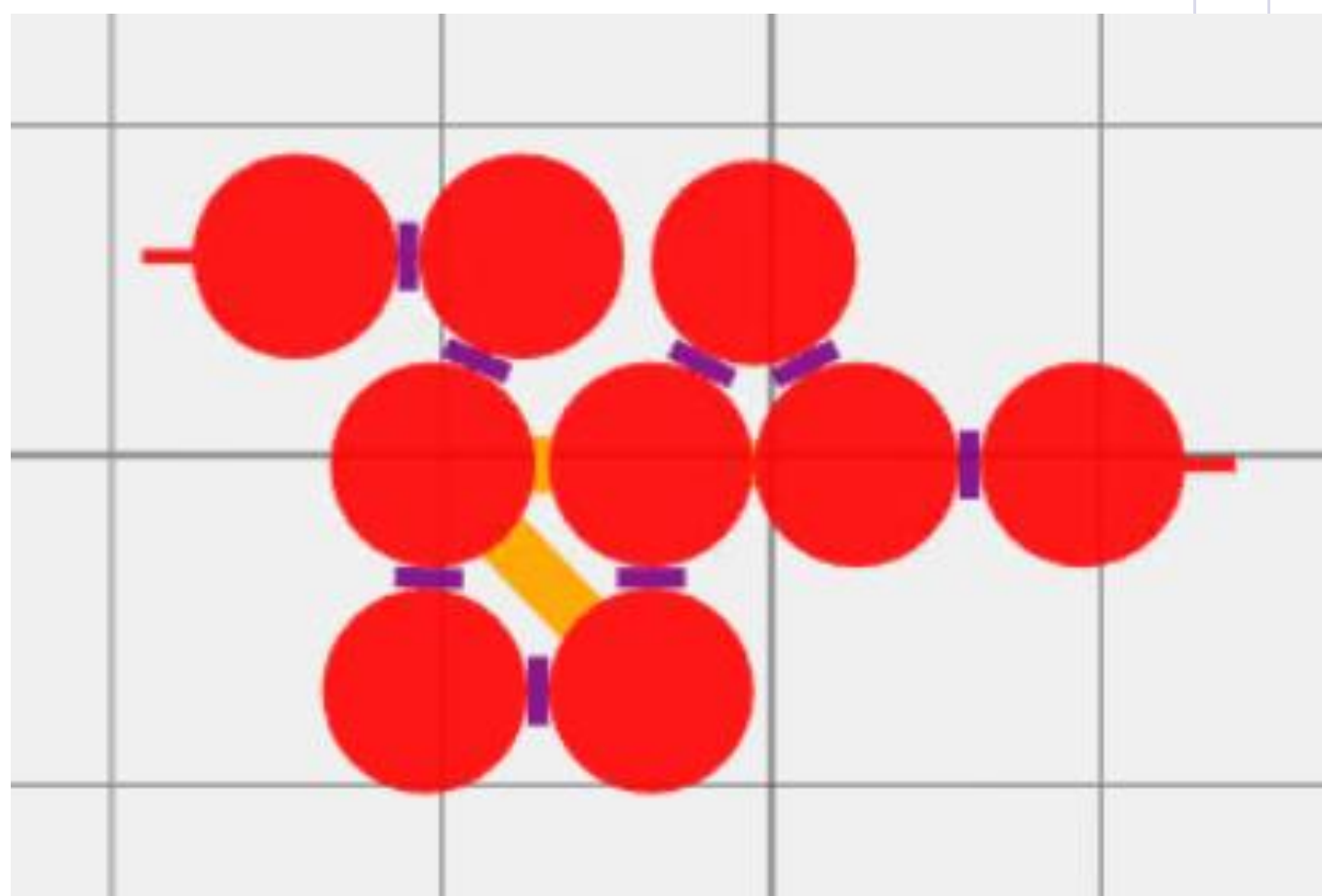
I/O  
Schemes

Fully 3D  
modelling

# 3D Modeling Function Workflow



- Automatic generate the 3D model from user defined topology ;
- Support generic modelling layout design work;
- Cross coupled structure add-on;
- Uniform & Non-uniform layout definition;



**Cavity  
Analysis**

**Coupling  
Schemes**

**I/O  
Schemes**

**Fully 3D  
modelling**

