

A vertical bar on the left side of the slide, transitioning from orange at the top to purple at the bottom.

# IFC-SG

Quick start exercise – ARC discipline

# ARC Discipline

## EXERCISE 01 :

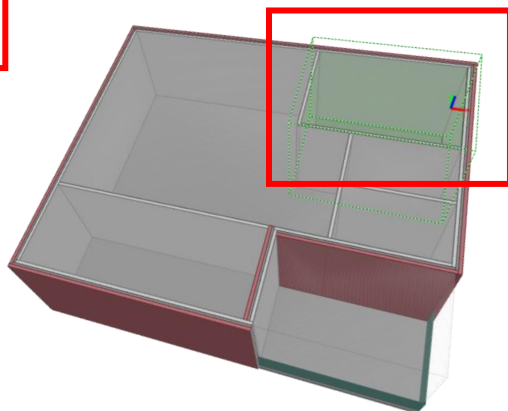
Define a **Space: "Kitchen"**

Active	Type	Name	Description
<input checked="" type="checkbox"/>	Project	Project Number	
<input checked="" type="checkbox"/>	Site	Default	
<input checked="" type="checkbox"/>	Building		
<input checked="" type="checkbox"/>	Building Storey	Ground Floor	
<input checked="" type="checkbox"/>	Slabs		
<input checked="" type="checkbox"/>	Walls		
<input checked="" type="checkbox"/>	Stairs		
<input checked="" type="checkbox"/>	Spaces		
<input checked="" type="checkbox"/>	Space		
<input checked="" type="checkbox"/>	Space		
<input checked="" type="checkbox"/>	Space		
<input checked="" type="checkbox"/>	Space		
<input checked="" type="checkbox"/>	Space		
<input checked="" type="checkbox"/>	Space		

**Note :** When exporting from BIM to IFC, IFC Space boundaries defines the physical or virtual boundaries of a space as a relationship to its surrounding elements

Agency	Identified Component	Identified parameters	Revit Representation	Archicad Representation	Tekla Structures Representation	Bentley OpenBuildings Representation	Discipline	IFC4 Entities	IFC Sub Types (* = USERDEFINED)	Property Set	Property Name	Property Type
NEA	Kitchen	Space Name	Rooms	Zone	N.A	Space	ARC	IfcSpace	Need not specify	SGPset_Space	SpaceName	Label

## IFC EXPORT OUTCOME



Element Specific	
CompositionType	ELEMENT
Guid	2-4up7taX2v6ih1P&MW&sr
IfcEntity	IfcSpace
<b>SGPset_Space</b>	
SpaceName	Kitchen

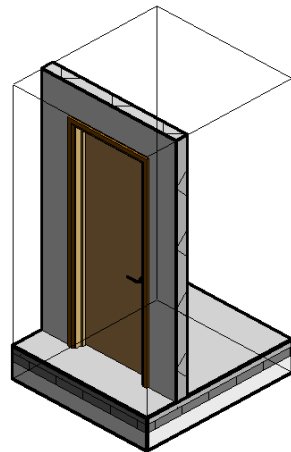
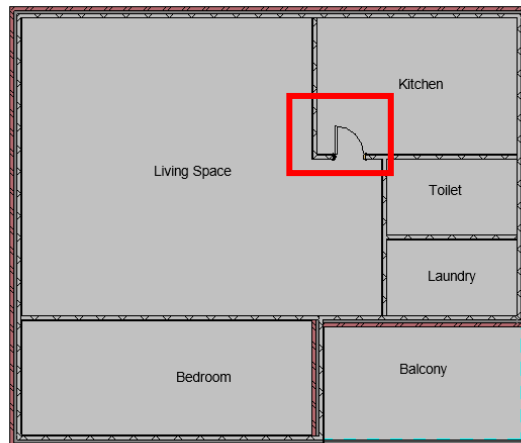
# ARC Discipline

## EXERCISE 02a :

Model a **Door** with FireRating: "2hr"

Agency	Identified Component	Identified parameters	Revit Representation	Archicad Representation	Tekla Structures Representation	Bentley OpenBuildings Representation	Discipline	IFC4 Entities	IFC Sub Types (* = USERDEFINED)	Property Set	Property Name	Property Type	Property Unit
SCDF	Door	Fire Rating	Doors	Door	N.A	Door	ARC	IfcDoor	DOOR	Pset_DoorCommon	FireRating	Label	hr

## IFC EXPORT OUTCOME



Element Specific	
Guid	0ux_tIMTDBpewW_cdxNcuU
IfcEntity	IfcDoor
Name	Doors_IntSgl:810x2110mm:319099
ObjectType	Doors_IntSgl:810x2110mm
OperationType	SINGLE_SWING_RIGHT
OverallHeight	2 110
OverallWidth	810
PredefinedType	DOOR
Tag	319099
Pset_DoorCommon	
FireRating	2hr

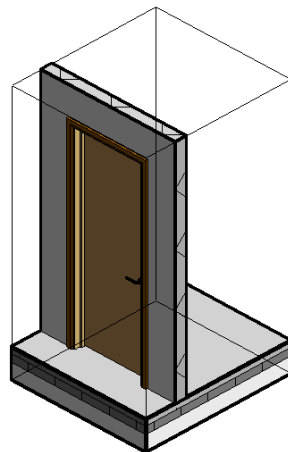
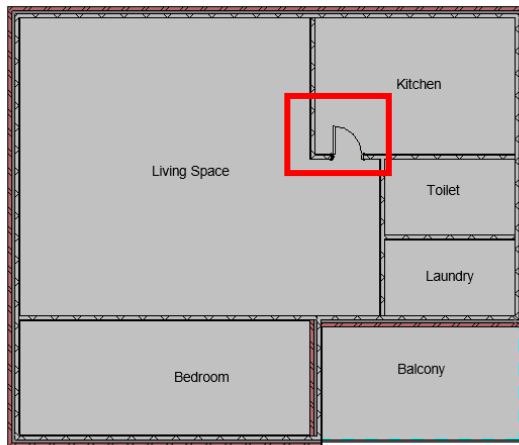
# ARC Discipline

## EXERCISE 02b :

Model a **Door** with the **Width** of the door

Agency	Identified Component	Identified parameters	Revit Representation	Archicad Representation	Tekla Structures Representation	Bentley OpenBuildings Representation	Discipline	IFC4 Entities	IFC Sub Types (* = USERDEFINED)	Property Set	Property Name (Yellow = automatically extracted from native)	Property Type	Property Unit
SCDF	Door	Width	Doors	Door	N.A	Door	ARC	IfcDoor	DOOR	SGPset_DoorDimension	Width	Length	mm

## IFC EXPORT OUTCOME



Element Specific	
Guid	02017954v590fbFlnGZGMI
IfcEntity	IfcDoor
Name	Doors_IntSgl:810x2110mm:317769
ObjectType	Doors_IntSgl:810x2110mm
OperationType	SINGLE_SWING_LEFT
OverallHeight	2110
OverallWidth	810
PredefinedType	DOOR
Tag	317769
+ Pset_DoorCommon	
+ Pset_EnvironmentalImpactIndicators	
+ Pset_ManufacturerTypeInformation	
+ Oto_DoorBaseQuantities	
- SGPset_DoorDimension	
Width	810

**Note:** yellow cells in the indicates that modellers need not define the values manually

The values will be automatically extracted from native BIM and exported into IFC via the software configuration.

Refer to the industry mapping "readme" tab for details

# ARC Discipline

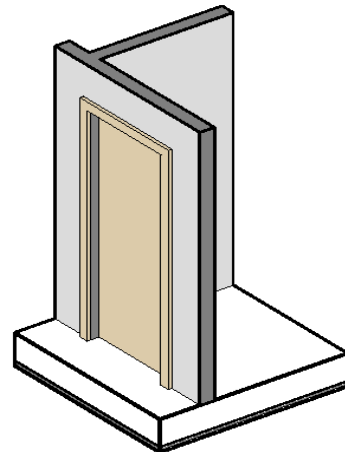
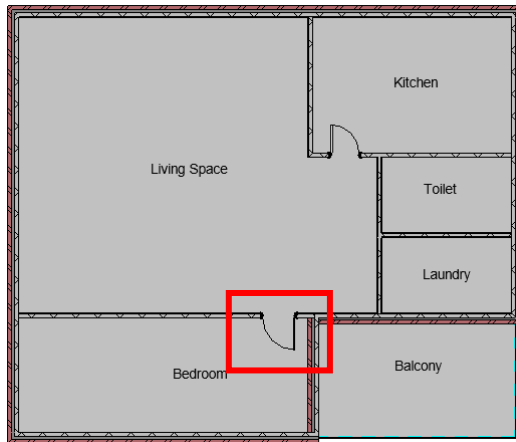
## EXERCISE 03 :

Model a **Door** with Subtype: **BLASTDOOR**

**Note:** Subtype refers to Predefined or \*= USERDEFINED

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Agency	Identified Component	Identified parameters	Revit Representation	Archicad Representation	Tekla Structures Representation	Bentley OpenBuildings Representation	Discipline	IFC4 Entities	IFC Sub Types (* = USERDEFINED)	Property Set	Property Name	Property Type	Property Unit
BCA	Blast Door	N.A	Doors	Door	N.A	Door	ARC	IfcDoor	*BLASTDOOR	N.A	N.A	N.A	N.A

## IFC EXPORT OUTCOME



Element Specific	
Guid	0lntrd6l1AGwfcnKJK5qjQ
IfcEntity	IfcDoor
Name	Single-Flush:800 x 2100:431198
ObjectType	BLASTDOOR
OperationType	NOTDEFINED
OverallHeight	2100
OverallWidth	800
PredefinedType	USERDEFINED
Tag	431198

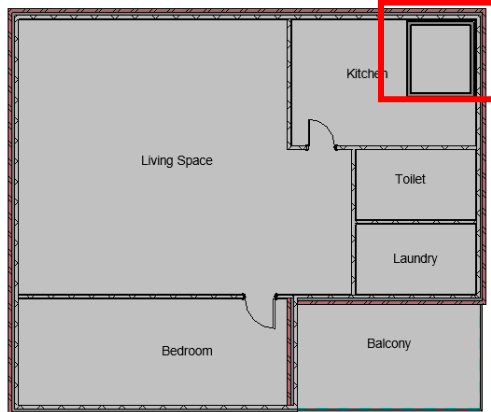
# ARC Discipline

## EXERCISE 04 :

Model a **Refuse Chute** within a space with **ConstructionMethod: PRECAST**

Agency	Identified Component	Identified parameters	Revit Representation	Archicad Representation	Tekla Structures Representation	Bentley OpenBuildings Representation	Discipline	IFC4 Entities	IFC Sub Types (* = USERDEFINED)	Property Set	Property Name
BCA	Precast Refuse Chute	Construction Method	Model Groups	IFC Assignments	N.A	System	ARC	IfcBuildingSystem	*REFUSECHUTE	SGPset_BuildingSystem	ConstructionMethod

## IFC EXPORT OUTCOME



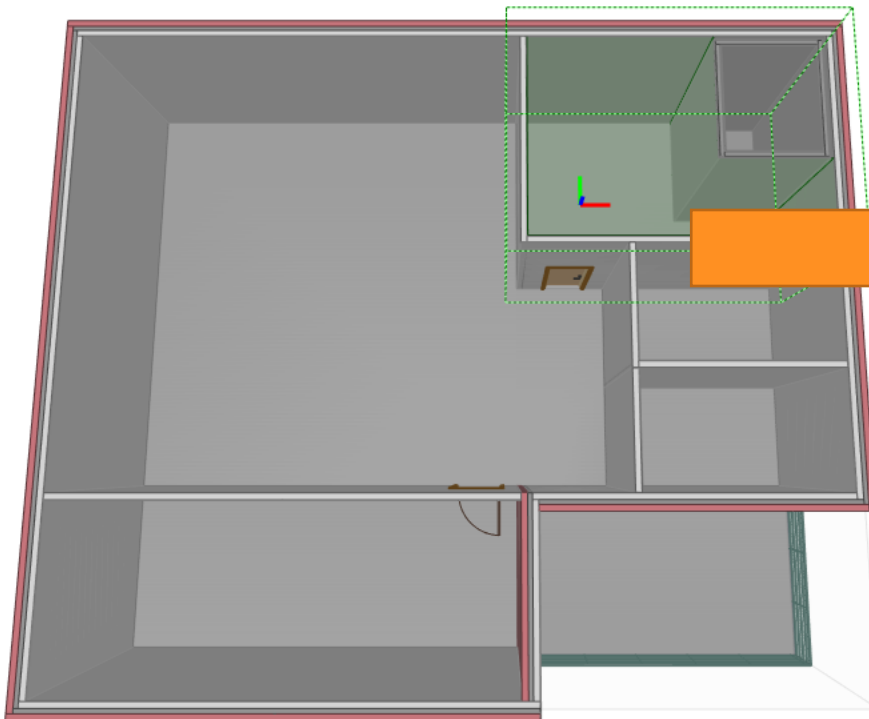
Name	Value
<b>Entity Information</b>	
Type	IfcBuildingSystem
Internal Type	IfcBuildingSystem
IFC OID	411
GUID	152jtSMib3CBuhFzomFhJ
GUID (readable)	450adddc-5ac9-4330-be2-3fdbcb03eb4ad
Name	Model Group:Refuse Chute:321878
Description	?
Object Type	REFUSECHUTE
Predefined Type	USERDEFINED

Name	Value
<b>PropertySets from entity</b>	
SGPset_BuildingSystem	
ConstructionMethod	Precast

# ARC Discipline

## IFC Space Boundary

IFC Space boundaries defines the physical or virtual boundaries of a space as a relationship to its surrounding elements



Space Boundary	
Door	Doors_IntSgl:810x2110mm:341156
Slab	Floor:Floor-Grnd-Susp_65Scr-80Ins-100Blk-75PC:341107
Wall	Basic Wall:Wall-Partn_30Gwb-70MStd-30Gwb:334601
Wall	Basic Wall:Wall-Partn_30Gwb-70MStd-30Gwb:334713
Wall	Basic Wall:Wall-Ext_102Bwk-75Ins-100LBlk-12P:341112
Wall	Basic Wall:Wall-Ext_102Bwk-75Ins-100LBlk-12P:341113
Wall	Basic Wall:Wall-Int_12P-100Blk-12P:341116
Wall	Basic Wall:Wall-Int_12P-100Blk-12P:341117

A vertical bar on the left side of the slide, transitioning from orange at the top to blue at the bottom.

# **ROAD VERGING WITH IFCSPACE**



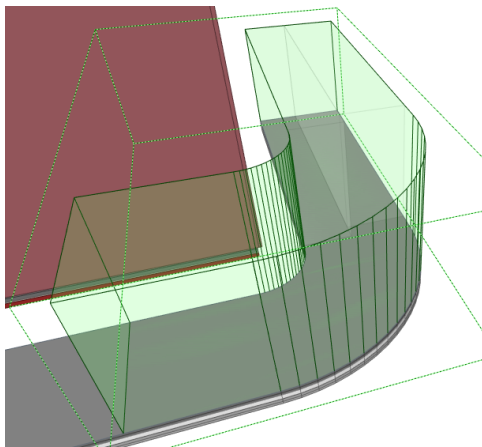
# ARC Discipline, IfcSpace

## EXERCISE 05 :

Define the boundary of a **Fire Engine Accessway** using **IfcSpace** and **SubType**

Agency	Identified Component	Identified parameters	Revit Representation	Archicad Representation	Tekla Structures Representation	Bentley OpenBuildings Representation	Discipline	IFC4 Entities	IFC Sub Types (* = USERDEFINED)	Property Set	Property Name (Yellow = automatically extracted from native)
SCDF	Fire Engine Accessway	N.A	Areas	Zone	N.A	Space	ARC	IfcSpace	FIREENGINEACCESSWAY	N.A	N.A

## IFC EXPORT OUTCOME



Element Specific	
CompositionType	ELEMENT
Guid	114RO79B922uvkF5so9U9Q
IfcEntity	IfcSpace
LongName	Area
Name	1
ObjectType	FIREENGINEACCESSWAY
PredefinedType	SPACE