

UNIVERSITÀ Degli studi FIRENZE DIDA DIPARTIMENTO DI ARCHITETTURA





**BRIEF |** Project Mission & Space Program

G. RIDOLFI



#### MAILAB Multimedi Architecture nteraction

# **Environmental Design Class**

stage development of the design process. containing a progressive level of information. produced in the previous steps.

- 01. BRIEF Program & Environmental Report • 02. CONCEPT Architectural Mass & Lay-out Optioneering • 03. SCHEME Architectural Proposal 04. DETAIL Envelope Design & Conceptual Prototype • 05. **FINAL** Project Communication

- The class is articulated on five teaching units reflecting the
- Each unit requires the submission of a specific assignment
- The last assignment requires to edit a booklet where to recompose, in a coordinated manner, all the information





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# **BRIEF** | Program & Environmental Report

This assignment is focus on the definition of concept, space program, and design strategies based on climate modeling. It includes the following steps:

- 1.1. Project Mission & Space Program
- 1.3. Climate based Design strategies
- 1.4. Site Assessment

#### **PROGRAM** | Mission, Branding, and Space program

1.2. Comfort Modeling & Environmental Users' Requirements











# part



BRIEF | Project Mission & Space program





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Interaction

### **PROGRAM | Mission, Branding, and Space program**



G. RIDOLFI | COMPUTATIONAL DESIGN IN THE POST-ENVIRONMENTAL AGE









Interaction

#### **PROGRAM | Mission, Branding, and Space program**





### Project Mission. Goals and Philosophy





### **Project Mission. Goals and Philosophy**

### Types of Projects based on investment, destination, and use

financial investment economic investment public investment









### Types of Projects based on investment, destination, and use



financial investment economic investment public investment

### **PROGRAM | Mission, Branding, and Space program**





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### Types of Projects based on investment, destination, and use



financial investment economic investment public investment







### Types of Projects based on investment, destination, and use



financial investment economic investment public investment









### Types of Projects based on investment, destination, and use



financial investment economic investment public investment









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### **Architectural Brandscaping. Designing Architectural Identity**

## building up project identity !



### **Architectural Brandscaping. Designing Architectural Identity From Outside-in brandscaping to Inside-out brandscaping**

(SE)( - SEAS

How can architects use branding as a means to differentiate places from the **inside out**--and not, as current development practices seem to dictate, from the outside in? When architecture brings together ecology, economics, and social well-being to help people and places regain self-sufficiency, writes Klingmann, it can be a catalyst for cultural and economic transformation.











### **PROGRAM** | Mission, Branding, and Space program

Klingmann argues that architecture can use the concepts and methods of **branding**--not as a quick-and-easy selling tool for architects but as a strategic tool for economic and cultural transformation. Branding in architecture means the expression of identity, whether of an enterprise or a city; New York, Bilbao, and Shanghai have used architecture to enhance their images, generate economic growth, and elevate their positions in the global village. Klingmann looks at different kinds of brandscaping today, from Disneyland, Las Vegas, and Times Square-prototypes and case studies in branding--to Prada's superstar-architect-designed shopping epicenters and the banalities of Niketown.

But beyond outlining the status quo, Klingmann also alerts us to the dangers of brandscapes. By favoring the creation of signature buildings over more comprehensive urban interventions and by severing their identity from the complexity of the social fabric, Klingmann argues, today's brandscapes have, in many cases, resulted in a culture of the copy. As experiences become more and more commodified, and the global landscape progressively more homogenized, it falls to architects to infuse an ever more aseptic landscape with meaningful transformations.











### **Architectural Brandscaping. Designing Architectural Identity**

### **Outside-in Brandscaping** | Brands creating Places







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### **Architectural Brandscaping. Designing Architectural Identity**

#### **PROGRAM | Mission, Branding, and Space program**

### **Outside-in Brandscaping** | Architectures branding Places





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### **Architectural Brandscaping. Designing Architectural Identity**

### Inside-out Brandscaping | Places Branding Architecture

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### **Architectural Brandscaping. Designing Architectural Identity**



#### **PROGRAM | Mission, Branding, and Space program**

### ADIGLIONE/PONTE, BRUGES, Belgium Progettista: Toyo Iro and Associates Bibliografia: ABITARE n.422

Il pizzo di Bruges viene presentato come suggestione sul tema della griglia, della struttura 📉 leggera e in filigrana, del chiaroscuro; è anche un riferimento contestuale alla tradizione manifatturiera della città per la quale Ito progetta il padiglione. A destra, in piccolo, un particolare della griglia metallica realizzata in seguito alle premesse progettuali.





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### **Architectural Brandscaping. Designing Architectural Identity**













### **Architectural Brandscaping. Designing Architectural Identity**







### **Architectural Brandscaping. Designing Architectural Identity**









### **Architectural Brandscaping. Designing Architectural Identity**





### **Architectural Brandscaping. Designing Architectural Identity**













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### **Architectural Brandscaping. Designing Architectural Identity**









Interaction

#### conoscenza

tramite una scala inizia il percorso della purezza

si viene introdotti all'interno del primo padiglione in cui ci si educa allo spirito del cha no yu attraverso una serie di racconti immagini e sensazioni che portano alla conoscenza

#### meditazione

dopo la conoscenza si accede al giardino zen dove la mente si libera dei pensieri preparandosi alla celebrazione del te il giardino con la sua essenziale purezza diviene luogo di filtro tra la conoscenza del rito e il rito stesso

#### cerimonia

infine il percorso conduce allo spazio
dedicato all'antica cerimonia del t
questo luogo è un rifugio dal caos per 
un momento meditativo di riflessione e
di comunione con il mondo esterno







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#### **PROGRAM** | Mission, Branding, and Space program

### **Architectural Brandscaping. Designing Architectural Identity**





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### **PROGRAM** | Mission, Branding, and Space program

### **Architectural Brandscaping. Designing Architectural Identity**



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BIC Sport Camp è il primo luogo meta di appassionati degli sport acquatici, remieri e nautici, amariti del mare e della natura incon-taminata, che hanno a cuore la sua salvaguardia. Il campo si pone come obiettivo il divertimento consapevole degli ospiti e dei partecipanti in corsi di primo, secondo e terzo livello di SUP, SURF, WINDSURF, KAYAK e VELA O'PEN.

Vivendo a strettissimo contatto con il mare, gli ospiti si dovranno confrontare anche con i suoi ritmi e con le difficoltà che si potr presentare: dai venti ostili, alle alte temperature, dalla scarsità di acqua a quella di beni di prima necessità. Il campo stagio aperto dalla fine di Aprile alla fine di Ottobre, ospita insegnanti, alunni e visitatori occasionali, i quali saranno ospitati in un luc per lo più all'aperto, che sarà comunque organizzato in vari spazi coperti: un'area comune, una sala per conferenze, un deposito le attrezzature sportive, una cucina, un appartamento per il personale e i dormitori per gli ospiti.

#### PHILOSOPHY

Il campo nasce come punto di raccolta per tutti coloro che vogliano approcciarsi al mare in modo differente, più informato, consapevole e sostenibile; infatti rispetto ad altri campus sportivi BIC Sport Camp offre corsi di formazione sull'inquinamento dei mati, sull'importanza del riciclo e sulle possibili innovazioni nel campo del riuso. Godere dei doni della natura significa saperil rispettare, per questo motivo all'interno del campus vengono utilizzati prodotti BIC Sport riciclati al 100%. le strutture che ospiteranno le attività avranno impatto zero essendo costituite da materiali riutilizzati. l'approvigionamento del campo avverrà tramite trasporto a basse emissioni e consisterà per lo più in prodotti del mare circos tanti l'area e a chilometro zero. Si organizzano periodicamente eventi e gare all'insegna della sensibilizzazione dei partecipanti, affinché di quest'esperienza possa rimanere non solamente la formazione sportiva e i ricordi, ma anche un'educazione al rispetto della natura e del mare, la consapevolezza che il miglioramento delle proprie abitudini costitu isce un contributo importante per la salute del planeta ed infine ma non ultima l'importanza della condivisione delle conoscenze acquisite.

#### ACTIVITIES

La durata dei corsi intensivi per tutte le attività sportive è di tre settimane, e si ripetono ciclicamente dalla fine di Aprile alla fine di Ottobre. Dal momento in cui entra a far parte del campus, l'ospite deve avere la consapevolezza di dover cambiare le propri abitudini: Alimentari II gruppo si dovrà adattare al quantitativo giornaliero, pervenuto per lo più da pesca a chilometro zero, con l'obiettivo di non produrre alcuno spreco e il minimo di immondizia. Spaziali Gli ospiti si troveranno ad alloggiare in piccoli spazi privati. Uso dell'acqua Non saranno ammessi sprechi di acqua, con un tetto massimo giomaliero.

Le differenti classi si smisteranno a seconda del livello di ogni partecipante (Principianti, Intermedi ed Espenti) e le cinque attività sportive avranno luogo dalla mattina presto fino ad ora di pranzo, e in seguito alla pausa si svolgeranno le attività finalizzate alla sensibilizzazione ambientale. le gite in mountain bike dell'area circostante al campus, la pesca sostenibile ed infine di sera la cena con condivisione di esperienze e documentari formativi.



#### "BIC Sport produce prodotti per sport acquatici da oltre 30 anni, iniziando a sviluppare processi di produzione riciclando qualsiasi tipo di plastica, eliminando le emissioni di gas e risparmiando energia e acqua. I prodotti BIC Sport sono pensati per preservare l'ambiente." Pierre-Henri Tallet, Product Manager





#### ALTERNATIVE GEOGRAPHICAL CONTEXTS

In Italia sono 181 siti dove è possibile praticare agevolmente sport nautici (vela e windsurf) per i quali sono assolutamente necessari il vento o le correnti aeree, fondamentali per lo svigimento dell'attività sportiva. Questi 18 luoghi sono stati selezionati inoltre per la loro capacità di riuscire a soddisfare le esigenze dei surfisti per la qualità delle onde, la migliore che si può desiderare in Italia. Andando ad escludere le spiagge adiacenti a città o centri abitati particolarmente significativi e valorizzando i paesaggi più suggestivi sono rimasti Santa Teresa, Stintino e Putzu Idu in Sardegna, Granitola in Sicilia e Brancaleone in Calabria.



Dopo accurate valutazioni è stata scelta la zona di Stintino, per il fascino del luogo, per la qualità del vento e per la lontananza da centri urbani. In particolare ha catturato la nostra attenzione un'isoletta disabitata a largo della costa sarda, la cui superficie è appena. 77 km quadrati

usta tra l'Aciasta a noni a cana Falcana a sud quest all'estremo energioscridentale della Sardenna. Es carte del s







SIMA Cluster in collaborazione con ADEME, Econide è uno strumento che fornisce la capacità di misurare e determinare gli aforzi amali delle asiende nel settore degli sport di bordo. BIC Sport ha ottenuto questo riconoscimento grazie all'implementazione di un sistema di gestio-CHERTEAN EPPERTUR AFTER-HEE 2050 444 Contraction of the local division of the loc 

t Riciclaggio a ciclo chiuso: riciclaggio di materie plastiche che vanno a costituire nuovi prodotti di qualità simile o piari a quella della vita precedente 2 Riciclaggio a cascata: riciclaggio di materie plastiche che vanno a formare prodotti di minore qualità Fonte: analisi del progetto di Ellen MacAtthur Foundation: www.ellenmacarthurfoundation.org

La produzione si basa su scorte infinite di materie prime fossili

Il 4 8% della produzione mondiale di petrolio viene utilizzato per produrre plastica. Se il consumo di materie plastiche aumenta secondo le previsioni, il consumo di petrolio da parte dell'intero settore delle materie plastiche rappresenteră il 20% del consumo totale entro il 2050, senza andare a guardare le previsioni di aumento del consumo di petrolio totale nei prossimi 35 anni

zare la bio-plastica, o ogni tipo di plastica riciclata, per la realizzazione di edifici ridurebbe drasticamente l'inquinamento. Introdurre questo materiale nell'architettura è un obiettivo da raggiungere nel prossimi anni. Gli esempi di architetture realizzate con l'utilizzo di bio-plastica in facciata piuttosto che come iso te o in copertura sono tanti, e sono un ottimo punto di partenza per chi vuole approcciarsi a questo tipo di tecnologia







Sul versante settentrionale è presente la torre dell'Isola Piana, torre aragonese edificata intorno al 1525 e restaurata nel 1931. Conosciuta anche come torre della Finanza, deve probabilmente questo secondo nome alla sua posizione, a monito dei traffici nel canale di Fornelli. La torre ha delle interesunti dimensioni, un'altezza di circa 18 metri, e un diametro di 16 metri fanno di essa una delle più grandi torri costiere del golfo dell'Asinara. È costituita da due piati, il primo con soffitti a cupola ed il secondo a fungo. L'isola Piana veniva utilizzata in passato come pascolo grazie alla transumanza ellettuata su barche da pesca.









### **Architectural Brandscaping. Designing Architectural Identity**







SPA SERVICES M
SKIN CARE
MINDFULNESS

NATIVE AMERICAN INSPIRED THERAPIES SPECIALTY TREATMENTS

ENU

HEALTH & WELLNESS

#### **PROGRAM** | Mission, Branding, and Space program

PHILOSOPHY & BRANDING



La Grotto Spa di Vancouver offre un desing innovativo che ha lo socpo di ricreare l'atmosfera di un grotta naturale. La struttura offre una serie di attività sensorial ate alla benessere di mente e corpo.





La Green T. House di Pechino si fonda sui dettami dell'antica cultura orientale, fondando la sua offerta su trattamenti a base di tè verde. Al suo interno racchiude sale di meditazione e sale yoga, per permettere ai fruitori della struttura di immergersi in un percorso che il porti alla riscoperta di se stessi.



Il centro Tabacon è tra i più apprezzati per i suoi ambienti spettacolari. In tutte le sale all'aperto si è cercato di fondere alla perfezione l'atmosfera delle sorgenti termali con i suoni della foresta pluviale, in modo tale da marcare il forte legame con la natura. La peculiarità di questo centro è il tradizionale rito di purificazione Tazmacal, eseguito in una sauna.



BODY I KEAIMENIS

CONNECTION WITH THE SPIRIT

FITNESS



POWER OF WATER

MASSAGE









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### **PROGRAM** | Mission, Branding, and Space program

### **Architectural Brandscaping. Designing Architectural Identity**







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### From place identities to missions, goals and main users

Escursionisti permanenza: 1-2 ai Visitatori 5 51 Staff Tempo di permanenza: Orario di lavoro (ipoteticamente h24)











Gestore Tempo di permanenza: Sempre



Ó

**AUX** 





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### **Architectural Brandscaping. Designing Architectural Identity**

	Escursionisti Tempo di permanenza: 1-2	giorni	5	l <sup>z</sup>	î4	۶ Y	01		1	*		ļ
	<b>Visitatori</b> Tempo di permanenza: 1-4+	giorni	2	z <sup>z</sup>	Ť <b>ŕ</b>	Y	<b>()</b>	0		\$		ļ
ki S	<b>Staff</b> Tempo di permanenza: Orario (ipoteticamente h24)	di lavoro	£	Jorgan Stranger	ŤŤ	Y	0	0		<b>‡</b>		
	<b>Gestore</b> Tempo di permanenza: Ser	npre			Ťŧ	¥ ک	0		<b>1</b>	<b>*</b>		
F	rom mair	US	ers to	o user	rs' ac	ctiviti	es ar	nd th	eir re	equire	emer	nts
	9	<b>**</b> n.		¢°	<b>أنام ا</b> met	* 🏝 clo	* <b>1</b> clo	∗ 🖁 ∘⊂	* 🎒 🕫	∗ ₿ ∝	* 🎒 🕷	m/s
	Ingresso	40	30	Stare in piedi	1.2	1.1	0.8	19-23	50-60	23-27	50-60	0.1
	Sala comune	35	40	Stare seduti	1.0	1.0	0.7	19-23	50-60	23-27	50-60	0
	Camere	30	150	Dormire	0.7	1.7	1.2	19-23	40-50	23-27	45-55	0
	Bagni	10	22.5	Stare seduti	1.0	1.0	0.7	19-23	40-50	23-27	45-55	0
Unità abitative - 28%	Bar	35	50	Stare seduti	1.0	1.0	0.7	19-23	50-60	23-27	50-60	0
Sala da pranzo - 9%	Cucina	4	15	Cucinare	1.8	0.8	0.5	19-23	40-50	23-27	40-50	0
Sala comune - 9%	Sala da pranzo	35	50	Stare seduti	1.0	1.0	0.7	19-23	50-60	23-27	50-60	0
Ingresso - 8%	Infermeria	3	6	Stare in piedi	1.2	1.0	0.7	19-23	50-60	23-27	50-60	0
Bar - 7%	Magazzini	2	20	Spostare	2.7	1.0	0.7	19-23	40-50	23-27	45-55	0
Cucina - 4%	Locali tecnici	2	10	Stare	1.2	1.0	0.7	19-23	40-50	23-27	45-55	0
Magazzini e Dispensa - 4%	Ufficio	2	6	Stare	1.0	1.0	0.7	19-23	40-50	23-27	45-55	0
Infermeria - 2%	Corridoi	10	20	Camminare	2.0	1.0	0.7	19-23	40-50	23-27	40-50	0.1

















### **Sensory Analysis and Experiential Design**







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### **PROGRAM | Mission, Branding, and Space program**

### **Sensory Analysis and Experiential Design**

### Sensorial Analysis & Mood Board



**Traces and patterns** 







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### **Sensory Analysis and Experiential Design**











### **Sensory Analysis and Experiential Design**

### **Editorial Design**

#### Style

Mirroring a flat, modern style of today's trending website and app design. Using melodic color tones of blues and greys to still give that calming and cool feeling when viewing sometimes hard information.



Typography HEADLINES Avenir Heavy - CAPS

SUB HEADLINES Avenir Extra Light - CAPS

Body Copy Avenir Book























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### **PROGRAM | Mission, Branding, and Space program**

### Program Check List

1	<b>BRAND IDENTITY</b>
	narrative and explanatory pictures
	brandscaping examples and narrat
	narrative on social, historica tions of the intervention area and
2	MISSION
	narrative about the mission
đ	list of users and their synthetic des
	list of functions with short descrip
	diagrams showing clusters of func criteria (such as: public/private us and/or functional homogeneity,)
	narrative showing architectural re- design approach, visions, main bu consistent with the contents illustr Mission
3	<b>FACILITY PROGRA</b>
	List of rooms in a spreadsheet wit tions (surface and hight) for each i
	Matrix of adiacences showing imp between single spaces (assume: 0 s must be adjacent; 2 adjacency is pr lutly necessary; 3 anywhere nearby not important; 5 spaces should be building) see: https://it.arch.ethz.o winnt/manuals/vectorworks/Onlin v8tkdessp.pdf

s
itive
Florence in general
escription
ption
ctions set on affinity se, operational continuity .)
eferences, conceptual uilding aspects and goals rated in Brand and
M
th dimensional specifica- identified spaces
portance of relationship same space; 1 spaces oreferred, but not abso- oy is fine; 4 distance is e far apart or in different .ch/html/e29tutorials/ inemanuals/spacepl/

#### FACILITY PROGRAM > Continued

Space schedule containing, for each identified space the following requirement specifications: (For all these aspects use information received during the Environmental technique control class)

daylight factor required

glazing/floor ratio required

air change rate required

winter/summer temperature required

winter/summer relative humidity required

acustic insulation level required (use qualitative attributes such as : high importance, moderate importance, indifferent, not required)

external view required (use qualitative attributes such as: high importance, moderate importance, indifferent, not required)

maximum area and cubic capacity of compartment allowed for fire safety

regulatory specifications on building escape provision for fire safety











### **Space Programming**

### > space dimensioning > space lay outing








## **Space Programming. Users' Requirements specification**

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_OBBY/ENTRY	30 mq	1.2	1.2	0.6	19-23	22-26	45-55	45-55	200-300	22-24
PANORAMIC PLATFORM	60 mq	1.2	1	0.6	19-23	22-26	30-50	40-55	200-300	22-24
DINING AREA	60 mq	1.0	1.5	0.9	19-23	22-26	40-50	45-60	300-500	22-24
KITCHEN	27 mq	1.8	1	0.6	19-23	22-26	40-50	45-60	250	22-24
LIVING AREA	50mq	1.0	1	0.6	19-23	22-26	40-50	45-60	300-500	22-24
TECHINCAL ROOM	12 mq	1.0	1	0.5	19-23	22-26	30-50	40-55		22-24
EXIBITHION HALL	150 mq	1.0	1	0.6	19-23	22-26	40-50	45-60	200-300	22-24
BAR AREA	40 mq	1.0	1.3	0.6	19-23	22-26	40-50	45-60	300-500	22-24
OFFICE	20 mq	1.0	1	0.9	19-23	22-26	30-50	40-55	500-750	22-24
TOILETS	15 mg	1.0	1	0.5	19-23	22-26	30-50	40-55	-	22-24

### **PROGRAM | Mission, Branding, and Space program**



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# **Space Programming. Users' Requirements specification**

## Space quantity specification

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LOBBY/ENTRY	30 mq	1.2	1.2	0.6	19-23	22-26	45-55	45-55	200-300	22-24
PANORAMIC PLATFORM	60 mq	1.2	1	0.6	19-23	22-26	30-50	40-55	200-300	22-24
DINING AREA	60 mq	1.0	1.5	0.9	19-23	22-26	40-50	45-60	300-500	22-24
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TOILETS	15 mq	1.0	1	0.5	19-23	22-26	30-50	40-55		22-24



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## **Space Program.** Quantity specification

**STATISTICAL SPACE PROGRAMMING** (based on case studies and manuals)

**ANALYTICAL SPACE PROGRAMMING** (based on functional analysis)



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**ANALYTICAL SPACE PROGRAMMING** (based on functional analysis)

CUCINA	Note: Le U.A. dovrano essere progettate in riferimento al numero di utenza prevista per		
Spazi di Servizio	ogni alloggio.		
	CUCINA Spazi di Servizio		



### **PROGRAM** | Mission, Branding, and Space program

## **Space Program.** Quantity specification

**ANALYTICAL SPACE PROGRAMMING** (based on functional analysis)



### **Aditazz Design Synthesis Application**

# **Space Program.** Quantity specification





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STATISTICAL SPACE PROGRAMMING (based on case studies and regulations)

TABELLA 6 - STANDARD DI SUPERFICIE: SCUOLA ELEMENTARE Decreto Ministeriale 18 dicembre 1975

### **Descrizione attività**

1	Attività didattiche:
	attività normali
	attività interciclo
	Indice di superficie totale rifer
	min.
	max
2	Attività collettive:
	- attività integrative e parascol
	- mensa e relativi servizi (1*)
3	Attività complementari:
	- biblioteca insegnanti
	Indice di superficie netta globa
	Indice di superficie max. netta
	Somma indici parziali
	min.
	max
	Connettivo e servizi igienici (4
	min.
	max
4	Spazi per l'educazione fisica:
	Palestra, servizi palestra, ecc.
5	Alloggio custode (se richiesto)
6	Spazi per la direzione didattic

### **PROGRAM | Mission, Branding, and Space program**

## **Space Program.** Quantity specification

	m²/alunno
STIMA ANA	ALITICA DA STANDAR
	1,80
	0,64
ito alle attività didattiche	
	2,44
	2,70
astiche	0,40
	0,70
	0,13
ale	5,21
globale	5,58
	3,67
	3,93
42% della somma precente)	
	1,54
	1,65

Tipo A<sub>1</sub>: 330 m<sup>2</sup> (da 10 a 25 classi) b): 80 m<sup>2</sup> netti ca, (se richiesti):  $100 \text{ m}^2$  netti

D







Interaction

STATISTICAL SPACE PROGRAMMING (based on case studies and regulations)





### **PROGRAM | Mission, Branding, and Space program**

# **Space Program.** Quantity specification









Interaction

### **PROGRAM | Mission, Branding, and Space program**

AREE PRODUTTIVE	AREA [m²]	AREE RICETTIVE	AFTEA APPROSSIMATIVA [m²]		
Magazzino stoccaggio malto	20	Ingresso/hall	130		
Magazzino stoccaggio lieviti e luppoli	20	Area visita	120		
Locale macinazione malto	70	Area vendite	80		
Sala cottura	300	Servizi pubblici	40	AREE PRODUTTIVE	2510
Cantina di fermentazione 1	550	Sala degustazione	150		mi
Area imbottigliamento	330	Caffetteria	100		
Magazzino prodotti chimici	20	Sala polifunzionale	150		
Magazzino tappi/etichette	20	Servizi privati	10		
Magazzino bottiglie vuote	120	Magazzini	25		
Cantina di rifermentazione in bottiglia	370	Cucina	15		
Stoccaggio prodotto finito	230	Dimensionamento di massima	-720		720
Ingresso dipendenti	120			AREE RICETTIVE	
Spogliatoi	40	AREE AMMINISTRATIVE	AREA		
Raccolta trebbie	20		APPROSSIMATIVA [m²]		
Locali tecnici impianti acqua	120	segreteria	30		
Locale caldaia/cavedi tecnici	60	Servizi	25		
Depositi	100	Uffici amministrazione	30		
Dimensionamento di massima	~ 2510	Uffici open space	100		222
		Sala riunioni	30	AREE AMMINISTRATIVE	ZZ5
TOTALE STIMATO	3455	Dimensionamento di massima	225		COMP.







## **Space Program.** Quantity specification







ARE	EP	RO	DU	TTI	VE

Space	e Program.	Quantity specification	n
AREE PRODUTTIVE	AREA [m²]	AREE RICETTIVE	AREA APPROSSIMATIVA [m²]
Magazzino stoccaggio malto	20	Ingresso/hall	130
Magazzino stoccaggio lieviti e luppoli	8 <b>20</b> 5	Area visita	120
Locale macinazione malto	70	Area vendite	80
Sala cottura	300	Servizi pubblici	40
Cantina di fermentazione 1	550	Sala degustazione	160
Area imbottigliamento	330	Caffetteria	100
Magazzino prodotti chimici	20	Sala polifunzionale	150



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Architecture

Interaction

# **Space Program. Layout organization**





# **Space Program.** Layout organization



	A	B	С	D	E	F	G	Н	Ι	
4	0	1	1	1	0	0	0	0	0	
B	1	0	0	0	1	1	0	0	0	
С	1	0	0	1	0	0	1	0	0	
D	1	0	1	0	0	0	1	1	0	
E	0	1	0	0	0	0	0	0	1	
F	0	1	0	0	0	0	0	0	0	
G	0	0	1	1	0	0	0	0	0	
H	0	0	0	1	0	0	0	0	0	

0 0 0 0 1 0 0 0 0

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### The Adjacency Matrix





















## **Space Program.** Layout organization

**Bubble Graphs** 



### **PROGRAM | Mission, Branding, and Space program**





## **Space Program. Computational Programming**





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### **PROGRAM | Mission, Branding, and Space program**







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## **Space Program. Computational Programming**

A       Name       1     Name       2     Office 1       3     Office 2
2 Diffice 1 3 Diffice 2
3 Dffice 2
4 Conference Room
5 Reception
6 F
7

### **PROGRAM | Mission, Branding, and Space program**

Using Spreadsheets









Multimedia Architecture Interaction

## **Space Program. Computational Programming**

4		A
1		Define 4
2	+	Unice 1
3		Office 2
4	+	Conference Room
5	*	Reception
6	*	Circulation
	•	Walls
W	ork	sheet Entry

### **PROGRAM | Mission, Branding, and Space program**

Using Spreadsheets





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Architecture

Interaction



## **Space Program.** Computational Programming

# dynamic evaluation during the design phase





### **PROGRAM** | Mission, Branding, and Space program

**Using Spreadsheets** 



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UNIVERSITÀ DEGLI STUDI FIRENZE





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# **Space Program. Computational Programming**

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🕀 💭 Views (all)	
E Floor Plans	
Level 1	
Level 2	
Site	
E Ceiling Plans	
Level 1	
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E Legends	
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Sheets (all)	
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### **PROGRAM | Mission, Branding, and Space program**

Autodesk Revit 2019 - STUDENT VERSION - P	oject1 - Floor Plan: Level 1	<ul> <li>Time a basened or shorts.</li> </ul>	· ()	
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# **Space Program. Computational Programming**

## http://www.mailab.biz/space-planning-concept/

IDENTITY



24

February

0

Share



Space planning in early conceptual design: Tools & Tutorials

TOOL> TRELLIGENCE AFFINITY: EXTENDING BIM TO SPACE PROGRAMMII AND PLANNING

## TUTORIAL> SPACE RAENALIGENCE AFFINI

## **VECTORWORKS SPACE PLANNIN**

TUTORIAL> SYNTACTIC DESIGN Pirouz Nourian

**GRASSHOPPER SYNTACTIC DESIG** 

Guide>EGAN SPACE PLANNING Peter Egan

## **REVIT EGAN SPACE PLANNING ADD**

### **PROGRAM** | Mission, Branding, and Space program

**Integrated Digital Tools** 

RESOURCES CONTACT US PORTFOLIO IN PROGRESS

LOGIN

BLOG

IG	Trelligence is a Houston-based software company founded in early 2002 that is focused on enhancing the design process through tools for architectural programming, space planning and early conceptual and schematic design. Affinity is available as a stand-alone application or with plug-ins to the latest versions of Revit Architecture, ArchiCAD, and SketchUp.
ΓΥ	A video part series covering the basic features of the Space Planning suite in Vectorworks 2013. Part 1 demonstrated creating Spaces with the Space tool, and creating Spaces from polygon objects using the Create Objects from Shapes menu command. Part 2 demonstrates creating Spaces with Text files using the Import Adjacency Matrix command. Part 3 demonstrates creating design layers to accommodate a space plan that occupied multiple floors or levels. Part 5 demonstrates creating walls automatically from the completed Space object layout using the Create Walls from Spaces command.
	Syntactic Design* (Designing with Space Syntax) for Grasshopper. A plugin for configurative architectural design designed and made by Pirouz Nourian and Samaneh Rezvani. This work is licensed under the Creative Commons Attribution- NonCommercial-NoDerivs 3.0 Unported License. * a Grasshopper plugin (download)
JIN	The app is intended to help the user work in an intuitive and graphic way during early design. It allows for multiple rapid, lightweight iterations and reduces repetition and tedium in plan development. Helps keep track of program spaces during the design process and provides constant, graphic display of program reconciliation. The app also provides a rudimentary bubble diagram at each step along the way. The app will import a user defined space program in CSV format. Changes to the program can easily be made and re- imported. * a Revit add-on (download)





Multimedia Architecture Interaction

# **Space Program. Computational Programming**

Integrated





### **PROGRAM | Mission, Branding, and Space program**

ed Digital Tools	W-AK-B1-P0+2.45-Pianolerra	Didattica normale	4	Aula 04	45,00 m²	54,4 m²	9,4 m²	SI	/00,00€	31.500,00	38.109,68€	
	W_AD_R1_D1_16 10_DrimeDiano	Didattica pormalo	5	Aulo 05	45.00 m <sup>2</sup>	50 / m2	5 / m2	Qì	700.00£	31 500 00	35 301 70£	_
	W-AD-R1-D1-r1+0.10-rimoPiano	Didattica normale	6	Aula 06	45,00 m <sup>2</sup>	51.6 m <sup>2</sup>	0,4 m <sup>2</sup>	Si Sì	700,00€	31.500,00	38 230 646	_
	W AD B1 D1 +6 10 PrimoDiano	Didattica normale	7	Aula 00	45,00 m <sup>2</sup>	50.0 m <sup>2</sup>	5,0 m <sup>2</sup>	01 Qì	700,00€	21 500,00	25 625 665	_
	W_AB_B1_P1_+6_10_PrimePiane	Didattica normale	9		45,00 m <sup>2</sup>	50,9 m²	5,9 m²	Sì	700,00€	31.500,00	35.11/ 52£	_
	W AD B1 D1 +6 10 DrimeDiane	Didattica normale	0		45,00 m <sup>2</sup>	51.6 m <sup>2</sup>	0,2 m <sup>2</sup>	01 Qì	700,00€	21 500,00	20 007 004	_
	W-An-DI-FI-+0.10-FIIII0Fian0	Didattica normale	9 10	Aulo 10	40,00 m <sup>2</sup>	04,0111° 51.0 m2	9,0 III- 6.0 m <sup>2</sup>	01 01	700,00€	21 500,00	25.050.200	_
	W AD D1 D1 +6 10 PrimoPiano	Didattica normale	11		45,00 m <sup>2</sup>	50.5 m <sup>2</sup>	0,2 III-	01	700,00€	21 500,00	20.009,095	_
	W AD D1 D1 +6 10 PrimoPiano	Didattica normale	10		45,00 m <sup>2</sup>	50,0 m <sup>2</sup>	5,0 m <sup>2</sup>	01 01	700,00€	21 500,00	25.022,205	_
		Diuduica noimaie	12	Auld 12	40,00 111-	00,0 III-	5,5114	31	700,00€	31.300,00	JJ.221,00€	_
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	13	Aula 13	45,00 m <sup>2</sup>	50,3 m <sup>2</sup>	5,3 m <sup>2</sup>	Sì	700,00€	31.500,00	35.184,10€	
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	14	Aula 14	45,00 m <sup>2</sup>	54,4 m <sup>2</sup>	9,4 m <sup>2</sup>	Sì	700,00€	31.500,00	38.083,64€	
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	15	Aula 15	45,00 m <sup>2</sup>	50,7 m <sup>2</sup>	5,7 m <sup>2</sup>	Sì	700,00€	31.500,00	35.508,06€	
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	16	Aula 16	45,00 m <sup>2</sup>	50,0 m <sup>2</sup>	5,0 m <sup>2</sup>	Sì	700,00€	31.500,00	34.996,92€	
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	17	Aula 17	45.00 m <sup>2</sup>	54.4 m <sup>2</sup>	9,4 m <sup>2</sup>	Sì	700.00€	31.500.00	38.109.68€	_
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	18	Aula 18	45.00 m <sup>2</sup>	51.2 m <sup>2</sup>	6.2 m <sup>2</sup>	Sì	700.00€	31,500.00	35.809.41€	
日本語 (1997年) 1997年)	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	19	Aula 19	45.00 m <sup>2</sup>	50.3 m <sup>2</sup>	5.3 m <sup>2</sup>	Sì	700.00€	31,500.00	35.204.19€	_
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica normale	20	Aula 20	45.00 m <sup>2</sup>	50.1 m <sup>2</sup>	5.1 m <sup>2</sup>	Sì	700.00€	31,500.00	35.102.97€	-
e altività 612 milione de la constante de 12 milione de la constante de la						,	-1					
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	W-AR-B1-I11.20-Seminterrato	Didattica speciale	21	Au <b>l</b> a musica	16,00 m <sup>2</sup>	 46,2 m <sup>2</sup>	30,2 m <sup>2</sup>	Sì	900,00€	14.400,00	41.601,72€	
	W-AR-B1-I11.20-Seminterrato	Didattica speciale	31	Aula psicomotricità	16,00 m <sup>2</sup>	41,6 m <sup>2</sup>	25,6 m <sup>2</sup>	Sì	900,00€	14.400,00	37.432,71€	
	W AD B1 D0 12/15 DiapoTorra	Didattica enocialo	26	Aulo attività varia 01	16.00 m <sup>2</sup>	25.1 m <sup>2</sup>	0.1 m <sup>2</sup>	¢ì	700.00£	11 200 00	17 567 855	_
	W AD B1 D0 12 45 DianoTorra	Didattica speciale	20	Aula allivita varia un	16,00 m <sup>2</sup>	20,1 III- 50 3 m <sup>2</sup>	3,1111- 2/1.2 m2	Si Sì	000,000	14.400.00	17.007,000	_
	W AD D1 D1 245 PlanoTerra	Didattica speciale	22	Aula eu anistica	16,00 m <sup>2</sup>	00,0 III-	7.4 m <sup>2</sup>	01 Cì	900,00€	14.400,00	40.200,70€	_
$\frac{1.20^{\frac{1}{2},20^{\frac{1}{2}}}}{2.50^{\frac{1}{2},\frac{1}{2},\frac{1}{2}}} \approx \frac{1.20}{2.50}$	W AD D1 D1 245 DianoTorra	Didattica speciale	24	Aula information 02	16,00 m <sup>2</sup>	20,4 III* 50.1 m <sup>2</sup>	2/1 m <sup>2</sup>	01 Cì	900,00€	14.400,00	Z1.029,40t	_
	W AD D1 D0 1245 PignoTorra	Didattica speciale	20	Aula linguo	16,00 m <sup>2</sup>	50.0 m2	0/ 0 m2	01 Cì	000,00€	14.400,00	40.102,000	_
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	W-AR-B1-P1-+6.10-PrimoPiano	Didattica speciale	27	Aula attività varia 02	16,00 m <sup>2</sup>	26,9 m <sup>2</sup>	10,9 m <sup>2</sup>	Sì	700,00€	11.200,00	18.821,81€	
	W-AR-B1-P1-+6.10-PrimoPiano	Didattica speciale	28	Aula attività varia 03	16,00 m <sup>2</sup>	21,7 m <sup>2</sup>	5,7 m²	Sì	700,00€	11.200,00	15.190,00€	
		I							ŀ			
		Di la contra de la			40.00			<u> </u>			10 007 510	
	W-AR-B1-P2-+9.75-SecondoPiano	Didattica speciale	29	Aula attivita varia 04	16,00 m <sup>2</sup>	23,3 m²	7,3 m²	Si	/00,00€	11.200,00	16.337,51€	_
	W-AR-B1-P2-+9.75-SecondoPlano	Didattica speciale	30	Aula attivita varia 05	16,00 m <sup>2</sup>	25,0 m <sup>2</sup>	9,0 m²	SI	/00,00€	11.200,00	17.521,90€	
1.20 2.50 <sup>1.20</sup> <sup>1.20</sup> <sup>1.20</sup> <sup>1.20</sup>	W-AR-B1-I11.20-Seminterrato	Locale di servizio	43	Deposito		21.5 m <sup>2</sup>			700.00€		15.052.19€	
	W-AR-B1-I11.20-Seminterrato	Locale di servizio	86	Locale pulizie		2.4 m <sup>2</sup>			700.00€		1.684.56€	
	W-AB-B1-I11.20-Seminterrato	Locale di servizio	44	Ripostiglio 01		17.2 m <sup>2</sup>			700.00€		12.048.15€	
	W-AR-B1-I11.20-Seminterrato	Locale di servizio	83	Servizi personale		19.1 m <sup>2</sup>			800.00€		15.284.42€	
	W-AR-B1-I11.20-Seminterrato	Locale di servizio	84	Servizi personale		10.5 m <sup>2</sup>			800.00€		8.418.56€	
				eon na porconaro							0	
	W-AR-B1-P0-+2.45-PianoTerra	Locale di servizio	87	Locale pulizie		 2,4 m <sup>2</sup>			700,00€		1.673,04€	
	W-AR-B1-P0-+2.45-PianoTerra	Locale di servizio	88	Locale pulizie		2,5 m <sup>2</sup>			700,00€		1.771,00€	
	W_AB_B1_D1_16 10_PrimoPiono	Locale di cervizio	80	Locale pulizie		2 /1 m2			700.00€		1 673 ∩ <i>1</i> £	
	W-AR-B1-P1-+6 10-PrimoPiano	Locale di servizio	09			2,4 III <sup>-</sup> 2.5 m <sup>2</sup>			700,00€		1 771 00£	
	W-AR-R1-P1-+6 10-PrimoPiano		45	Riportiglio 03		13.0 m <sup>2</sup>			700,00€		0 235 38£	
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	W-AR-B1-P2-+9.75-SecondoPiano	Locale di servizio	91	Locale pulizie		2,4 m <sup>2</sup>			700,00€		1.673,04€	
	W-AR-B1-P2-+9.75-SecondoPiano	Locale di servizio	92	Locale pulizie		2,4 m <sup>2</sup>			700,00€		1.706,73€	
	W-AR-B1-P2-+9.75-SecondoPiano	Locale di servizio	46	Ripostiglio 04		13,2 m <sup>2</sup>			700,00€		9.235,38€	
	W-AR-B1-P2-+9.75-SecondoPiano	Locale di servizio	47	Ripostiglio 05		6,8 m <sup>2</sup>			700,00€		4.790,80€	
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		0 and 1 all 1	00			 107 0			000.000		00 505 070	
	W-AK-BI-II-I 20-Seminterrato	Servizi all'alunno	33	Locale sporzionamento	000.000	 40,7 m²	00.0 - 0	Ma	800,00€	100 000 00	32.595,2/€	
	W-AR-BI-II1.20-Seminterrato	Servizi all'alunno	32	HETETIONO	200,00 m²	1/2,0 m²	-28,0 m²	INO	800,00ŧ	160.000,00	137.590,36€	
	W-AR-B1-P0-+2.45-PianoTerra	Servizi all'alunno	35	Ambulatorio		16.5 m <sup>2</sup>			800.00€		13.187.95€	
	W-AR-B1-P0-+2.45-PianoTerra	Servizi all'alunno	34	Locale custodi		25,0 m <sup>2</sup>			700,00€		17.479,63€	

Totale generale: 89

3180,5 m<sup>2</sup>

1.652.384,05 2.349.236,03€ 547.571,83€

6.609,68€
3.801,70€ 6.730,64€ 4.125,66€ 3.614,52€ 6.727,28€ 4.359,39€ 3.822,28€ 3.721,06€
3.684,10€ 6.583,64€ 4.008,06€ 3.496,92€ 6.609,68€ 4.309,41€ 3.704,19€ 3.602,97€
27.201,72€ 23.032,71€
6.367,85€ 30.836,70€ 6.629,40€ 30.732,39€ 30.862,52€
7.621,81€ 3.990,00€
5.137,51€ 6.321,90€
-22.409,64€
<b>F74 000</b>

# **Space Program. Computational Programming**









MAILAB Multimedia Architecture

Interaction







MAILAB Multimedia Architecture Interaction

### **PROGRAM | Mission, Branding, and Space program**

# **Space Program. Computational Programming**



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Room Data Sheet - Departmental	Staff Restroom	2	110 soft			2	110 soft		Fetty Nano		
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El Space Program Report	Euklarig Support	1 15 5	2,243 soft			S	2,243 sth		Grand Total Area	14,235 saft	
D Share Register Report - Departmental	Building Services	Statement in the second	TLOR GITT	-			1,200, 300		Grand Total Gross A	rea 54,236 soft	
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Bionese Program Report -1	Service Elevator	1	100 sqft			1	100 set		Locked	0	
erspace Program Report - 11	Service Entrance	1	50 sqft		-	1	50 sqft		Name	Space	
El Space Program Report - Phased	Service Stanway	1	that 00t	1000		-	100 002	Service and Envergency only	Service Changes		
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	Einhbits-Mixed Media	1.0 1	1,250 641				1,250 515		- Group Properties		
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	Pottery Galery	1	1790-sqft			1	250 scft		Antes Factor Calc	Sum	
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Architecture

Interaction

### **PROGRAM | Mission, Branding, and Space program**

# **Space Program. Computational Programming**



<ul> <li>Project Details</li> <li>Admin Services</li> <li>Add Group Add Group</li></ul>						
Space Program   Group   Group   Cotal (All Phases)   Space (-2703 sqft)   Administration (1527 sqft)   Admin Services (-605 sqft)   Delete   Admin Services (-605 sqft)   Admin Services (-605 sqft)   Delete   Delete   Admin Services (-605 sqft)   Delete   Delete   Delete   Delete   Delete   Delete   Administration   Delete   Administration   Delete   Delete   Administration   Delete	🛛 🕸 Space 🛛 🞯 Admin Se	ervices 🛛 🔠 Sto	ry 1 🛛 🔠 Build	ling 🛛 🗐 Space Pro	ogram Report 🛛 🤯	
Oroup Item Delete     Fotal (All Phases) Space     Space (-2703 sqft)     Administration (1527 sqft)   Administration (1527 sqft)   Administration (1527 sqft)   Admin Services (-605 sqft)   Admin Services (-605 sqft)   Admin Services (1436 sqft)   Building Support (117 sqft)   Building Support (117 sqft)   Building Support (117 sqft)   Sales & Marketing (774 sqft)   Sales & Marketing (774 sqft)   Admining   Admining   Admining   Building Support (175 sqft)   Customer Service (756 sqft)   Building Support (117 sqft)   Building Support (117 sqft)   Building Support (117 sqft)   Customer Service (756 sqft)   Building Support (117 sqft)   Customer Service (756 sqft)   Building Support (117 sqft) <th>d Item 🕭 Edit 🛥 Delete 🕕</th> <th>🛆 🍉 🔊</th> <th></th> <th></th> <th></th> <th></th>	d Item 🕭 Edit 🛥 Delete 🕕	🛆 🍉 🔊				
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Space (-2703 sqft)   Administration (1527 sqft)   Building Support (219 sqft)   Building Support (117 sqft)   Building Support (117 sqft)   Building Support (117 sqft)   Building Support (117 sqft)   Product (828 sqft)   Product (828 sqft)   Building (774 sqft)   Administration   Administration   Administration   Building (774 sqft)   Administration   Administration   Administration   Administration   Building Support (117 sqft)   Building Support (117 sqft)   Administration   Building Support (128 sqft)   Building Support (828 sqft)   Coppen P   Coppen P   Coppen P   Cubrotic   Cubrotic <t< td=""><td></td><td>1.27</td><td></td><td>44498 sqft</td><td>1</td><td></td></t<>		1.27		44498 sqft	1	
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<ul> <li>Administration (1527 sqft)</li> <li>Admin Services (-605 sqft)</li> <li>Admin Service (219 sqft)</li> <li>Admin Support (117 sqft)</li> <li>Admin Support (117 sqft)</li> <li>Admin Service (756 sqft)</li> <li>Admin Support (828 sqft)</li> <li>Admin Support (828 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (756 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (756 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (756 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (756 sqft)</li> <li>Admin Service (774 sqft)</li> <li>Admin Service (774</li></ul>	ces	1.0		7764 sqft		
Admin Services (-605 sqft)   Image: Service (756 sqft)   Image: Serv	m		180 sqft	5 @ 180 sqft	12' x 15'	
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<ul> <li>Copy/Fa</li> <li>Copy/Fa</li> <li>Copy/Fa</li> <li>Public Areas (1436 sqft)</li> <li>Public Areas (1436 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Product (828 sqft)</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>HR</li> <li>Customer Parameter Service (756 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Subtota</li> <li>Customer Service (756 sqft)</li> <li>Subtota</li> <li>Customer Service (756 sqft)</li> <li>Subtota</li> <li>Customer Service (756 sqft)</li> <li>C</li></ul>	x		54 sqft	5 @ 54 sqft	6' x 9'	
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<ul> <li>Public Areas (1436 sqft)</li> <li>Building Support (117 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Customer Group (432 sqft)</li> <li>Product (828 sqft)</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>Meeting</li> <li>Open P</li> <li>Library/I</li> <li>Meeting</li> <li>Office</li> <li>Open P</li> <li>Subtotz</li> <li>Custorer I</li> <li>Subtotz</li> <li>Custorer I</li> <li>Subtotz</li> <li>Custorer I</li> <li>Subtotz</li> <li>Subtotz</li> <li>Custorer I</li> <li>Custorer I</li> <li>Subtotz</li> <li>Subtotz<!--</td--><td>Room (Large)</td><td></td><td>540 sqft</td><td></td><td>TRU</td><td></td></li></ul>	Room (Large)		540 sqft		TRU	
<ul> <li>Building Support (117 sqft)</li> <li>Customer Service (756 sqft)</li> <li>Executive Group (432 sqft)</li> <li>Product (828 sqft)</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>HR</li> <li>Office</li> <li>Office</li> <li>Office</li> <li>Office</li> <li>Office</li> <li>Office</li> <li>Customer Service</li> <li>Customer Service</li> <li>Subtota</li> <li>Customer Service</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>Executive Group</li> <li>Customer Service</li> <li>Customer Service</li> <li>Customer Service</li> <li>Subtota</li> <li>Customer Service</li> <li>Customer Service</li> <li>Customer Service</li> <li>Subtota</li> <li>Customer Service</li> <li>Customer Servic</li></ul>	Room (Small)		108 sqft	2 @ 108		
Customer Service (756 sqft)   Executive Group (432 sqft)   Product (828 sqft)   Sales & Marketing (774 sqft)   Sales & Marketing (774 sqft)   Copen P   Copen P <td></td> <td></td> <td>108 sqft</td> <td>TYU</td> <td>x 12'</td> <td></td>			108 sqft	TYU	x 12'	
Server A Server A Server A Subtota Subtota Sales & Marketing (774 sqft) Sales & Marketing (774 sqft) Copen P Copen P Cop	an Area		1080 sof		45' x 24'	
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<ul> <li>Product (828 sqft)</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>Sales &amp; Marketing (774 sqft)</li> <li>Meeting</li> <li>Office</li> <li>Open P</li> <li>Training</li> <li>Subtota</li> <li>Legal &amp; According</li> <li>Library/</li> <li>Meeting</li> <li>Office</li> <li>Office</li> <li>Open P</li> <li>Legal &amp; According</li> <li>Library/</li> <li>Meeting</li> <li>Office</li> <li>Office</li> <li>Open P</li> <li>Subtota</li> <li>Legal &amp; According</li> <li>Meeting</li> <li>Office</li> </ul>	1			7764 sqft		
Sales & Marketing (774 sqft)      Sales & Marketing (774 sqft)      Library/      Office      Copen P      Training      Subtota      File/Sto      Library/      Meeting      Office      Office		TIN		4752 sqft		
Meeting Office Open P Training Subtota De Legal & Acc File/Sto Library/ Meeting Office	leference	AL	504 sqft	1 @ 504 sqft	42' x 12'	
Office Open P Training Subtota Cubtota	Room (Small)		108 sqft	4 @ 108 sqft	9' x 12'	
Open P Training Subtota Den P Subtota Den Den Den Den Den Den Den Den De			108 sqft	4 @ 108 sqft	9' x 12'	
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Subtota Legal & Acc File/Sto Library/ Meeting Office	Room	_	576 sqft	4 @ 576 sqft	24' x 24'	Available for all Dept us
E Legal & Acc File/Sto Library/ Meeting Office	ſ			4752 sqft		
File/Sto Library/I Meeting Office	ounting	1.0		2628 sqft		
Library/ Meeting Office	age	_	108 sqft	1 @ 108 sqft	9' x 12'	Must be coded-lock se
Office	leference		504 sqft	2 @ 504 sqft	42' x 12'	
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			108 sqft	2 @ 108 sqft	9' X 12'	
Site Program Open P	an Area		1080 sqft	1080 sqft	45 x 24	
Design	E	10		2628 sqft		
E Public Area		1.0	1000	2326 sqn	and the second	

### Integrated Digital Tools



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Architecture Interaction

### **PROGRAM | Mission, Branding, and Space program**

# **Space Program. Computational Programming**

		Pro	igra	m Item	Area Factor	Phase I Qty	Phase I Area	Phase II Qty	Phase II Ar	Total Qty	Total Area	Space Type	
	Spa	се			1.0	33	30,948 sqft	17	8,674 sqft	50	39,621 sqft		
	Ξ	Galle	ery		1.2	33	21,148 sqft	17	8,674 sqft	50	29,821 sqft		
		Ξ,	Adn	ninistration	1.31	7	838 sqft	3	409 sqft	10	1,247 sqft		
J				Hallway								Hallway	I
1				File/Copy Area		1	96 sqft	1	96 sqft	2	192 sqft	Closet	
				File/Copy Ar								Closet	
			-	Meeting Room		1	92 sqft			1	92 sqft	Meeting Proce	
		-	_	Meeting Rol		h				Ale: 10		GES	
			Ξ	Mgr Office		3	324 sqft	2	216 sqft	5	DH	100	
			٦	Mgr Office						B	Y	Office	
				Mgr Office					TR			Office	
				Mgr Office				-0	N			Office	
				Mgr Office			TIT					Office	
				Mgr Office		A						Office	
				Workstation	CF.		128 sqft			2	128 sqft	Workstation	
				CP	101						/	Workstation	
												Workstation	
				Subtotal		7	640 sqft	3	312 sqft	10	952 sqft		
			Build	ding Support	1.15	7	2,369 sqft			7	2,369 sqft		
				Hallway								Hallway	
				Building Service			1,200 sqft				1,200 sqft	Building Services	
				Building Ser								Building Services	
				Service Access		2	500 sqft			2	500 sqft	Building Services	
				Service Acc								Hallway	
				Service Acc								Hallway	
			Ξ	Service Elevator		1	100 sqft			1	100 sqft	Elevator	
				Service Elev								Elevator	









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### **PROGRAM** | Mission, Branding, and Space program

# **Space Program.** Computational Programming





### **Relationships / Bubble Diagrams**

Relatios hip s diagrams are generated from the program automatically. When the program changes, so do the diagrams, to represent new quan, tits ar meas, and relatios hips. Functios include:

- Use of color represegtin program departments / divisions
- User-customizable relatios hi p indi c ators arrows, lines, etc.
- User-customizable diagram annotatios t ext, circles, lines, arrows, etc.
- Ability to save different views of the same data
- Prigtin to scale, with customizable tite b ock s







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# **Space Program. Computational Programming**



Affinity - Office - Austin Project (IDE)	
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	🕨 🔍 View: Space Plan Diagram 👻 🔹
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🕀 Design	🔇 Admin Services 🛛 🕄 Space 🔍 🕄 A
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🗉 🗂 Building	
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🗈 🔲 Conference Room	
🗉 🔲 Conference Room	
🗉 🔲 Conference Room	
🗉 🔲 Conference Room	
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Copy/Fax/Mail	
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Elevator	
🔲 Hallway	
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Hallway	
Hallway	
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Lobby	
Mechanical	
Meeting Room (Small)	
Meeting Room (Small)	
Office	
Office	0
Open Plan Area	
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Roctarirant	
② Analysis	
1 Library	
T.	

Conference Room in Administration.Admin Services X = Y = 54', Size = 30' x 18', Area = 540.0

### **PROGRAM** | Mission, Branding, and Space program

### **Integrated Digital Tools**





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### **PROGRAM** | Mission, Branding, and Space program

# **Space Program.** Computational Programming











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# **Space Program.** Computational Programming



### **PROGRAM | Mission, Branding, and Space program**





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# **Space Program. Computational Programming**



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Select Energy Analysis	Affinity7
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Graphics	Program Item Area Fa
View Scale 1/8" = 1'-0"	- Space 1.27
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□ [0] Views (all)	Server Room
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Click to select TAB for alternates CTRL ad	ids SHIET unselects
Circle to select, TAD for alternates, CTAL ad	

### **PROGRAM | Mission, Branding, and Space program**

### **Integrated Digital Tools**



![](_page_64_Picture_13.jpeg)

 $\bigcirc$ 

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![](_page_65_Picture_1.jpeg)

![](_page_65_Picture_2.jpeg)

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# **Space Program. Computational Programming**

![](_page_65_Picture_8.jpeg)

Affinity - Office - Design (IDE)	
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	View: Stacking Diagram -
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> Project Details	🛃 Story 1 🗿 Building 🗿 Bu
Space Program	QQ 2 9 2 1 Font
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Total (All Phases)	
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🖂 🛅 Administration (-2444 sqft)	
🗆 🛐 Admin Services (-459 sqft)	
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Conference Room (0.0)	Story 6 541 sqtt Supply Services
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Server Room (0.0)	LIF S
🗆 🛐 HR (396 sqft)	C/- Services
Library/Reference (0.0)	Stor, S41 sqft
Meeting Room (Small) (0.0)	(+
Office (-2.0)	Story 1 410
Open Plan Area (0.0)	()
Training Room (0.0)	Building
🖯 🛐 Legal & Accounting (216 sqft) 🔽	Contracting.
Site Program	
Design	
1 Analysis	
1 Library	4
Current total	1.0 out of 1.0

### **PROGRAM | Mission, Branding, and Space program**

### **Integrated Digital Tools**

![](_page_65_Picture_12.jpeg)

![](_page_65_Picture_13.jpeg)

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![](_page_66_Picture_0.jpeg)

![](_page_66_Picture_1.jpeg)

![](_page_66_Picture_2.jpeg)

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### **PROGRAM | Mission, Branding, and Space program**

# **Space Program. Computational Programming**

![](_page_66_Picture_8.jpeg)

Affinity - Office - Design (Master)1	(IDE)
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⊡ E9Story 2	
⊞ Btory 5	
⊞ Story 6	
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4	
<ul> <li>▲</li> <li>▲</li></ul>	

![](_page_66_Picture_11.jpeg)

![](_page_67_Picture_1.jpeg)

![](_page_67_Picture_2.jpeg)

![](_page_67_Picture_3.jpeg)

MAILAB Multimedia Architecture Interaction

# **Space Program. Computational Programming**

![](_page_67_Picture_8.jpeg)

File Edit View Insert Modify Tools	Reports Help
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Project Program	Schematic Design
Schematic Design	Site Story 1-1 Story(1) Story(2) Sto
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Gift Shop (0 saft)	
Spaces Library	
Øpenings Library	
Objects Library	
People Library	
Reports & Analysis	

### **PROGRAM | Mission, Branding, and Space program**

![](_page_67_Picture_12.jpeg)

![](_page_68_Picture_2.jpeg)

![](_page_68_Picture_4.jpeg)

### **OTHER RECENT SOFTWARE OFFERING A CONSISTENT INTEGRATION WITH BIM PLATAFORMS**

![](_page_68_Picture_6.jpeg)

![](_page_68_Picture_7.jpeg)

Multimedia Architecture

Interaction

## **Space Program. Computational Programming**

**Integrated Digital Tools** 

# Egan BIM Resources

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Architecture

Interaction

### **PROGRAM | Mission, Branding, and Space program**

# **Space Program. Computational Programming**

![](_page_69_Picture_7.jpeg)

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### Integrated Digital Tools

![](_page_69_Figure_11.jpeg)

![](_page_69_Picture_12.jpeg)

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![](_page_70_Picture_1.jpeg)

![](_page_70_Picture_2.jpeg)

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Click to select, TAB for alternates, CTRL adds, SHIFT unselects.

### **PROGRAM | Mission, Branding, and Space program**

# **Space Program. Computational Programming**

![](_page_70_Picture_8.jpeg)

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### **Integrated Digital Tools**

![](_page_70_Figure_11.jpeg)

![](_page_70_Picture_12.jpeg)

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![](_page_71_Picture_1.jpeg)

![](_page_71_Picture_2.jpeg)

Multimedia Architecture Interaction

# **Space Program.** Computational Programming

![](_page_71_Picture_8.jpeg)

![](_page_71_Picture_9.jpeg)

![](_page_71_Figure_10.jpeg)

![](_page_71_Figure_11.jpeg)

### **PROGRAM** | Mission, Branding, and Space program

**Integrated Digital Tools** 

![](_page_71_Picture_14.jpeg)

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## **Space Program. Computational Programming**





### **PROGRAM | Mission, Branding, and Space program**









## **Space Program. Computational Programming**

**Integrated Digital Tools** 

## **VECTORWORKS SPACE SYNTAX**

	Adjacency Scor
Elevator Shaft	Score: 86
Porch	
Porch	
Porch	
Kitchen	
Hallway	- 4 - 1
Dining Room	
Bedroom	- 2
Closet	3
Bedroom	- 3
Bath	
Bath	5
Master Bath	
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Entry	
Closet	
Master Bedroom	3 2 - 1
Storage	
Pantry	
Hallway	
Hallway	
Mechanical	
Family Room	
Hallway	3
Stair	
Stair	
Stair Hallway	4
Elev Storage	4 -
Porch	

### Elevator Shaft

Design Layer-1 (2861.3 S.F.)

Total Used: (2861.3 S.F.)

Porch Porch Porch Kitchen Hallway Bedroom

## **PROGRAM | Mission, Branding, and Space program**







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# **Space Program.** Computational Programming



## **PROGRAM** | Mission, Branding, and Space program





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# **Space Program.** Computational Programming



### **PROGRAM** | Mission, Branding, and Space program





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# **Space Program.** Computational Programming

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85,281 For Help, press F1

### **PROGRAM** | Mission, Branding, and Space program







## **Space Program.** Computational Programming



### **PROGRAM** | Mission, Branding, and Space program





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Interaction

## **Space Program.** Computational Programming



## **PROGRAM** | Mission, Branding, and Space program





## **Space Program.** Computational Programming



### **PROGRAM** | Mission, Branding, and Space program





## **Space Program.** Computational Programming

# A GRASSHOPPER LIBRARY SYNTACTIC (Space Syntax for Generative Design)

- real-time Space Syntax analyses for parametric design
- interactive bubble diagram
- automated graph drawing algorithms .
- enumeration of plan configuration topologies .
- measuring the socio-spatial performance .





## **PROGRAM** | Mission, Branding, and Space program













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# **SYNTACTIC: SPACE SYNTAX GRASSHOPPER PATCH**





Interaction



## SYNTACTIC: SPACE SYNTAX GRASSHOPPER PATCH

**Evolutionary Algorithms** 



## 17.678074











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**Evacuation Planning Tool** 









Architecture Interaction

Fire Exit Risk Assessment in Revit

















Multimedia

Architecture Interaction

### **PROGRAM | Mission, Branding, and Space program**

## **REAL TIME SIMULATION SOFTWARE USING PARTICLES AGENT-BASE MODELING**

Pathfinder for evacuation simulation

https://www.thunderheadeng.com/pathfinder/



## **REAL TIME SIMULATION SOFTWARE USING PARTICLES AGENT-BASE MODELING**









### **PROGRAM | Mission, Branding, and Space program**

**Evacuation Planning Tool** 





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## **OTHER SIMULATION SOFTWARE FOR LAYOUT OPTIMIZATION**



### **PROGRAM** | Mission, Branding, and Space program

### **Bowl Bulider a Grasshopper Library**









12,96