

Centar urbane kulture Sinokoša

Galić, Tomislav

Master's thesis / Diplomski rad

2022

Degree Grantor / Ustanova koja je dodijelila akademski / stručni stupanj:

University of Split, Faculty of Civil Engineering, Architecture and Geodesy / Sveučilište u Splitu, Fakultet građevinarstva, arhitekture i geodezije

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:123:808752>

Rights / Prava: [In copyright](#)/[Zaštićeno autorskim pravom.](#)

Download date / Datum preuzimanja: **2025-02-17**



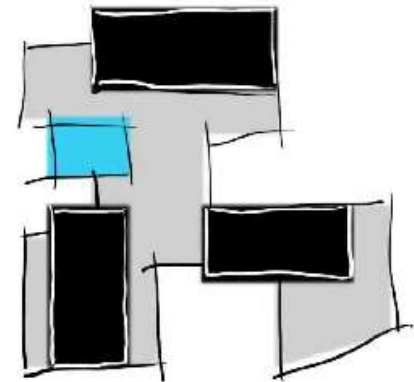
Repository / Repozitorij:

[FCEAG Repository - Repository of the Faculty of Civil Engineering, Architecture and Geodesy, University of Split](#)



UNIVERSITY OF SPLIT





CENTAR URBANE KULTURE **SINOKOŠA**

VIŠEKRITERIJALNA METODA DOBIVANJA PROGRAMSKOG ZADATKA

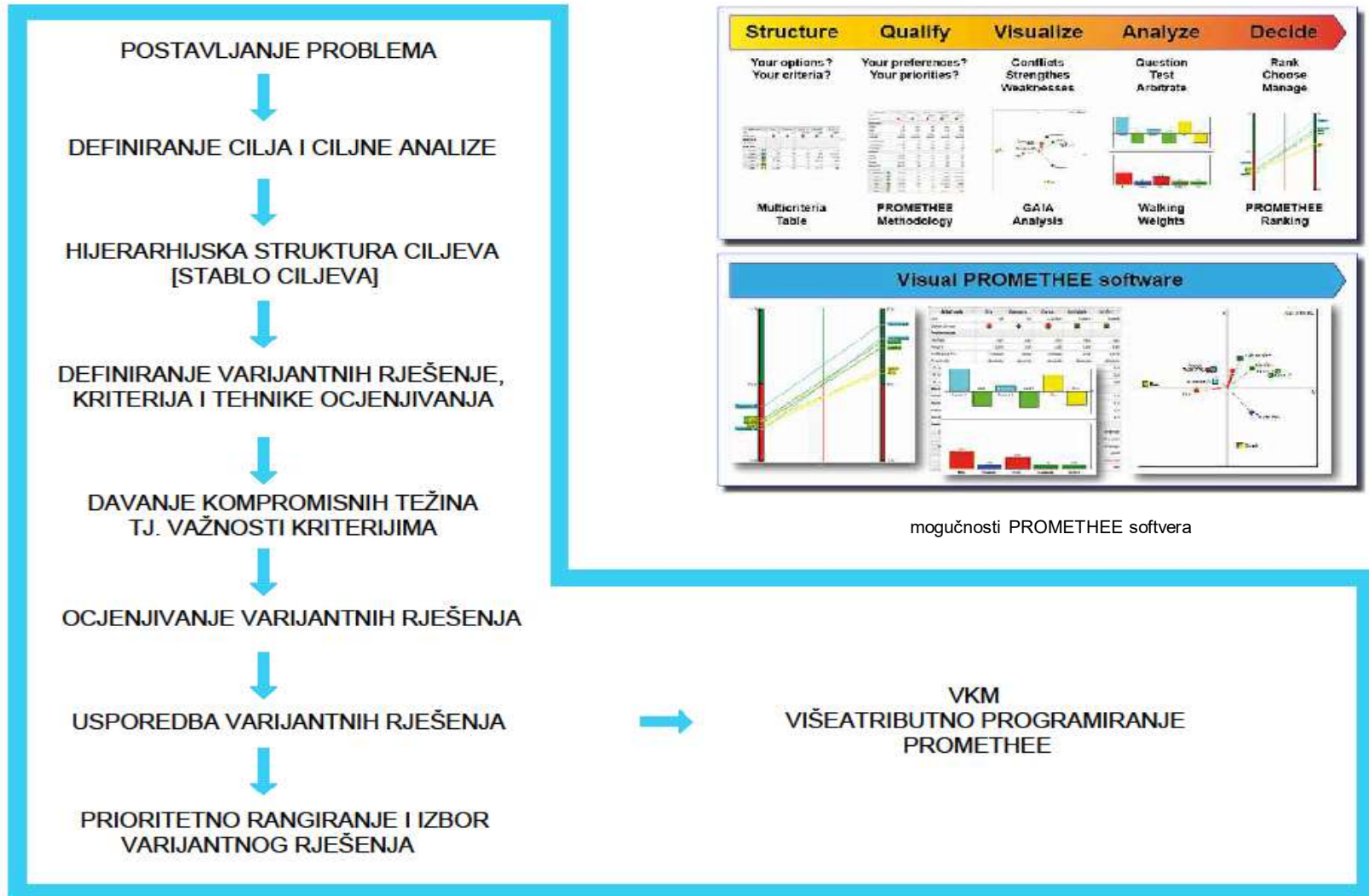


P R O M E T H E E

M E T H O D S

PROMETHEE METHODS logo

planiranje investicije

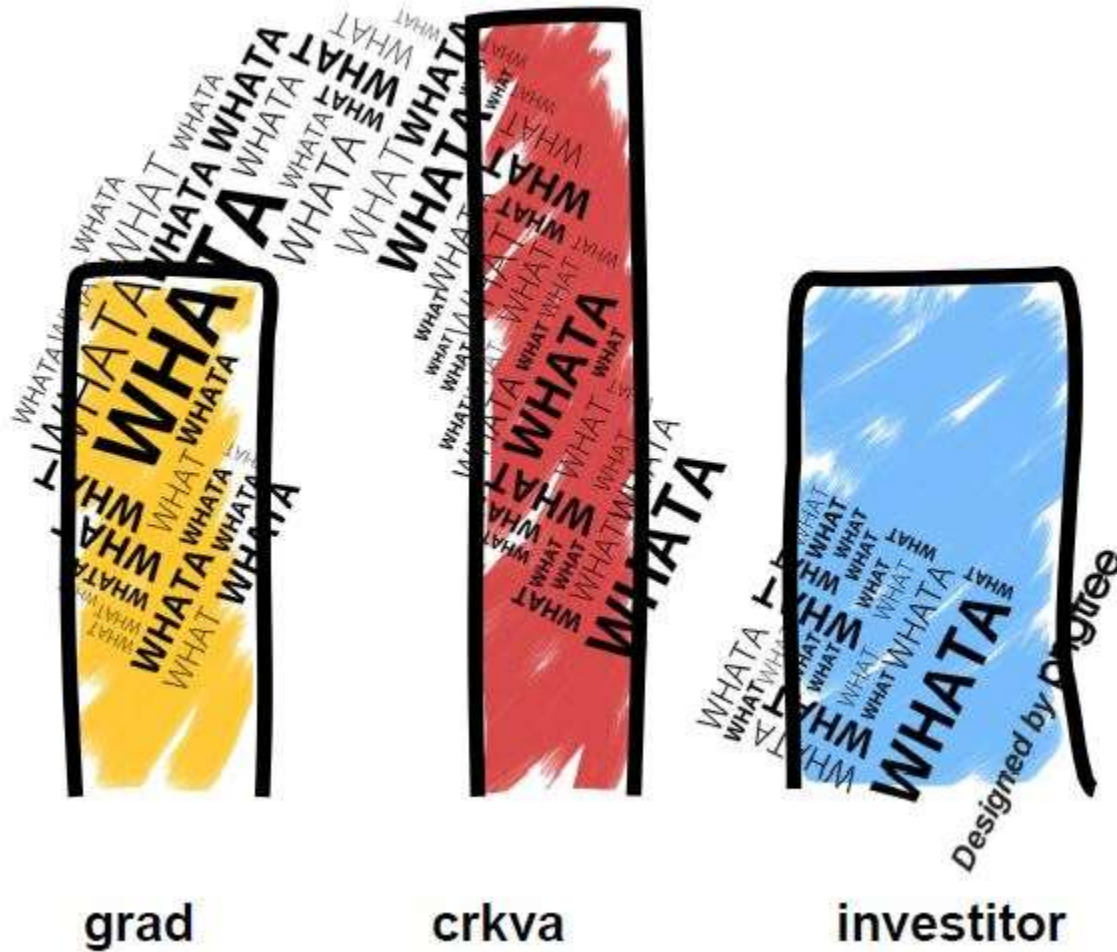


postavljanje problema



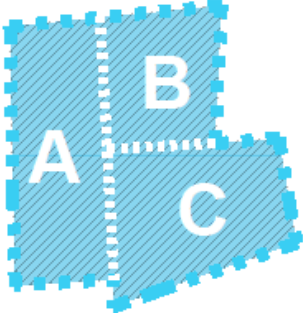
3 parcele, lokacija

definiranje cilja i ciljne analize



definiranje varijantnih rješenja, kriterija, tehnika

| SET 1 | SET 2 | SET 3 | SET 4 |
|------------|-----------|-----------|------------|
| 1 [A] | a [A] | A [A] | Xy [A+B+C] |
| 2 [B] | b [B] | B [B] | Yx [A_B_C] |
| 3 [C] | c [C] | C [C] | |
| 4 [A+B] | d [A+B] | D [A+B] | |
| 5 [A_B] | e [A_B] | E [A_B] | |
| 6 [A+C] | f [A+C] | F [A+C] | |
| 7 [A_C] | g [A_C] | G [A_C] | |
| 8 [B+C] | h [B+C] | H [B+C] | |
| 9 [B_C] | i [B_C] | I [B_C] | |
| 10 [A+B+C] | j [A+B+C] | J [A+B+C] | |
| 11 [A_B_C] | k [A_B_C] | K [A_B_C] | |

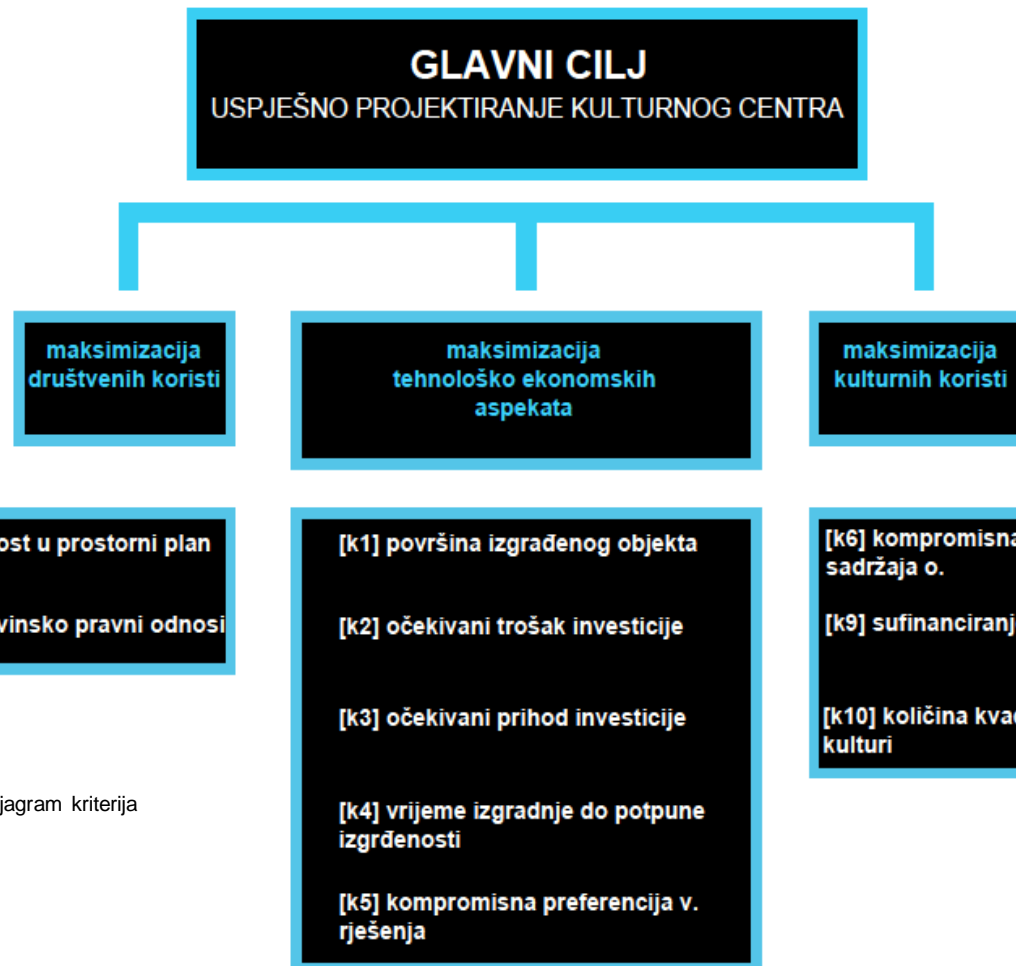


prikaz varijantnih rješenja i vlasništva

- [k1]** površina izgrađenog objekta
npr. 1000 m²
- [k2]** očekivani trošak investicije
npr. 1 000 000 €
- [k3]** očekivani prihod investicije
npr. 2 000 000 €
- [k4]** vrijeme izgradnje do potpune
izgrađenosti 12 mjeseci
- [k5]** kompromisna preferencija v. rješenja
procjena dionika ocjenom 0-200
- [k6]** kompromisna preferencija sadržaja o.
procjena dionika ocjenom 0-200
- [k7]** uklopljivost u prostorni plan
da/ne
- [k8]** čisti imovinsko pravni odnosi
da/ne
- [k9]** sufinanciranje grada
da/ne
- [k10]** količina kvadrata namjenjeno kulturi
5000 m²

prikaz raspisanih kriterija

hijerarhijska struktura ciljeva, vrednovanje ciljeva



dijagram kriterija

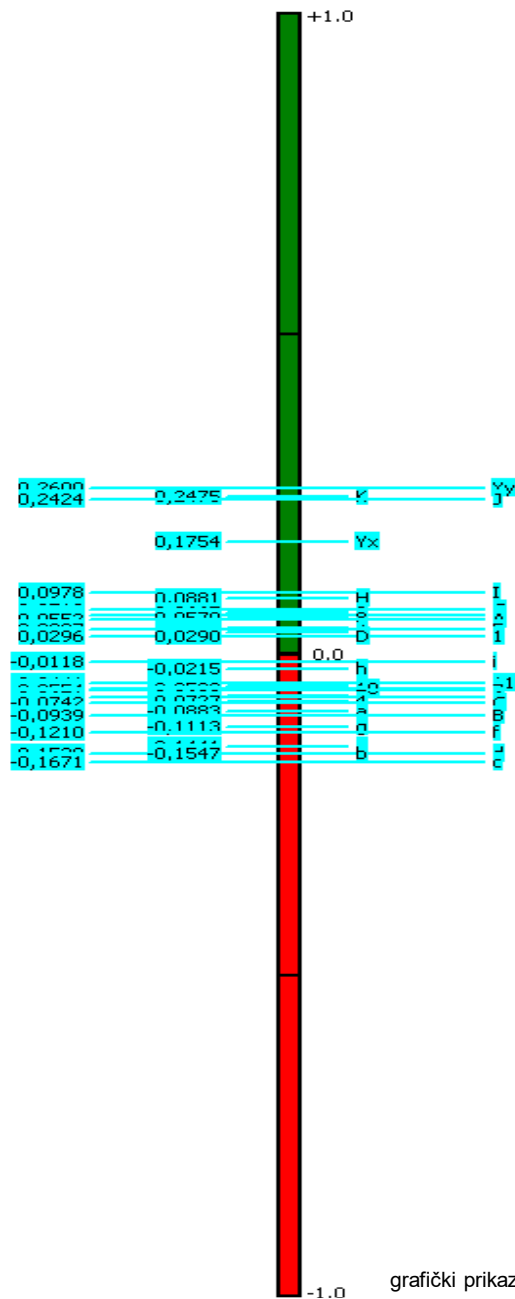
| KRITERIJI | OCJENE | | | |
|---------------------|--------|------|------------|--------|
| | Crkva | Grad | Investitor | Ukupno |
| [k1] površina | 7 | 10 | 8 | 8.33 |
| [k2] trošak | 0 | 3 | 0 | 1.00 |
| [k3] prihod | 20 | 0 | 77 | 32.33 |
| [k4] vrijeme | 0 | 7 | 11 | 6.00 |
| [k5] preferencijaV | 12 | 4 | 1 | 5.66 |
| [k6] preferencijaS | 6 | 11 | 3 | 6.66 |
| [k7] prostorni plan | 0 | 8 | 0 | 2.66 |
| [k8] vlasništvo | 37 | 5 | 0 | 14.00 |
| [k9] sufinansiranje | 0 | 10 | 0 | 3.33 |
| [k10] kultura | 18 | 42 | 0 | 20.00 |

tablica vrednovanja kriterija prema dioniku

ocjenjivanje varijantnih rješenja

| | površina | trošak | prihod | vrijeme | preferencijaR | preferencijaS | prostorni plan | vjeroštvo | sufinansiranje | kultura |
|--------------------|--------------|---------------|---------------|--------------|---------------|---------------|----------------|--------------|----------------|--------------|
| unit | m2 | € | € | mjeseci | ocjena | ocjena | da ne | da ne | da ne | m2 |
| Cluster/Group | | | | | | | | | | |
| Preferences | | | | | | | | | | |
| Min/Max | max | min | max | min | max | max | max | max | max | max |
| Weight | 8333333333.0 | 1.00 | 323333.00 | 6.00 | 566.00 | 866.00 | 266.00 | 14.00 | 333.00 | 20.00 |
| Preference Fn. | V-shape | V-shape | V-shape | V-shape | V-shape | V-shape | Usual | Usual | Usual | V-shape |
| Thresholds | absolute | absolute | absolute | absolute | absolute | absolute | absolute | absolute | absolute | absolute |
| - Q: Indifference | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| - P: Preference | 6200 | \$21,392,800 | \$4,840,000 | 9 | 120 | 75 | n/a | n/a | n/a | 4910 |
| - S: Gaussian | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Statistics | | | | | | | | | | |
| Minimum | 1800 | \$6,679,200 | \$0 | 15 | 50 | 25 | 0 | 0 | 0 | 190 |
| Maximum | 8000 | \$28,072,000 | \$4,840,000 | 24 | 170 | 100 | 1 | 1 | 1 | 5100 |
| Average | 463237142857 | \$167,922,342 | \$206,592,757 | 180571428571 | 87 | 67 | 314285714285 | 6 | 542857142857 | 184834285714 |
| Standard Dev. | 167714563786 | \$564,820,912 | \$166,214,888 | 226706679141 | 267314688816 | 262732889887 | 464230765979 | 489897948556 | 498159879261 | 151654445449 |
| Evaluations | | | | | | | | | | |
| 1 | 3000 | \$10,890,000 | \$0 | 16 | 100 | 100 | yes | yes | yes | 3000 |
| 2 | 1800 | \$6,679,200 | \$0 | 15 | 50 | 100 | yes | yes | yes | 1800 |
| 3 | 2000 | \$7,744,000 | \$0 | 16 | 50 | 100 | yes | yes | yes | 2000 |
| 4 | 4000 | \$15,488,000 | \$0 | 17 | 90 | 100 | yes | no | yes | 4000 |
| 5 | 4000 | \$15,488,000 | \$0 | 17 | 110 | 100 | yes | no | yes | 4000 |
| 6 | 4500 | \$17,278,800 | \$0 | 17 | 50 | 100 | yes | no | yes | 4500 |
| 7 | 4500 | \$17,278,800 | \$0 | 17 | 70 | 100 | yes | no | yes | 4500 |
| 8 | 4000 | \$15,197,600 | \$0 | 17 | 60 | 100 | yes | yes | yes | 4000 |
| 9 | 4000 | \$15,197,600 | \$0 | 17 | 80 | 100 | yes | yes | yes | 4000 |
| 10 | 5100 | \$21,054,000 | \$0 | 18 | 60 | 80 | yes | no | yes | 5100 |
| 11 | 5100 | \$21,054,000 | \$0 | 18 | 80 | 80 | yes | no | yes | 5100 |
| a | 3000 | \$10,890,000 | \$1,815,000 | 16 | 55 | 30 | no | yes | no | 730 |
| b | 1800 | \$6,679,200 | \$1,089,000 | 15 | 70 | 35 | no | yes | no | 240 |
| c | 2000 | \$7,744,000 | \$1,210,000 | 16 | 60 | 25 | no | yes | no | 190 |
| d | 1000 | \$15,488,000 | \$3,120,000 | 17 | 80 | 50 | no | no | no | 775 |
| e | 4000 | \$15,488,000 | \$2,420,000 | 17 | 100 | 50 | no | no | no | 775 |
| f | 4500 | \$17,278,800 | \$2,722,500 | 17 | 90 | 50 | no | no | no | 800 |
| g | 4500 | \$17,278,800 | \$2,722,500 | 17 | 110 | 50 | no | no | no | 800 |
| h | 4000 | \$15,197,600 | \$2,420,000 | 17 | 100 | 40 | no | yes | no | 475 |
| i | 4000 | \$15,197,600 | \$2,420,000 | 17 | 120 | 40 | no | yes | no | 475 |
| j | 5100 | \$21,054,000 | \$3,085,500 | 18 | 90 | 40 | no | yes | no | 745 |
| k | 5100 | \$21,054,000 | \$3,085,500 | 18 | 100 | 40 | no | yes | no | 745 |
| A | 4000 | \$13,310,000 | \$2,420,000 | 17 | 100 | 100 | no | yes | no | 975 |
| B | 2600 | \$8,615,200 | \$1,573,000 | 17 | 70 | 60 | no | yes | no | 435 |
| C | 3333 | \$10,455,000 | \$2,016,465 | 17 | 60 | 40 | no | yes | no | 512 |
| D | 6600 | \$19,021,200 | \$3,993,000 | 20 | 80 | 50 | no | no | yes | 1410 |
| E | 6600 | \$19,021,200 | \$3,993,000 | 20 | 100 | 50 | no | no | yes | 1410 |
| F | 7000 | \$22,360,800 | \$4,235,000 | 22 | 70 | 50 | no | no | yes | 2140 |
| G | 7000 | \$22,360,800 | \$4,235,000 | 22 | 90 | 50 | no | no | yes | 2140 |
| H | 6000 | \$20,328,000 | \$3,630,000 | 19 | 70 | 50 | no | yes | no | 960 |
| I | 6000 | \$20,328,000 | \$3,630,000 | 19 | 90 | 50 | no | yes | no | 960 |
| J | 8000 | \$28,072,000 | \$4,840,000 | 24 | 100 | 70 | no | yes | yes | 1300 |
| K | 8000 | \$28,072,000 | \$4,840,000 | 24 | 120 | 65 | no | yes | yes | 1300 |
| Xy | 7000 | \$25,652,000 | \$4,888,000 | 22 | 150 | 100 | no | yes | yes | 1200 |
| Yx | 6000 | \$23,232,000 | \$2,904,000 | 19 | 170 | 100 | no | yes | yes | 1200 |

Ocjenjeni kriteriji prema svim varijantnim rješenjima



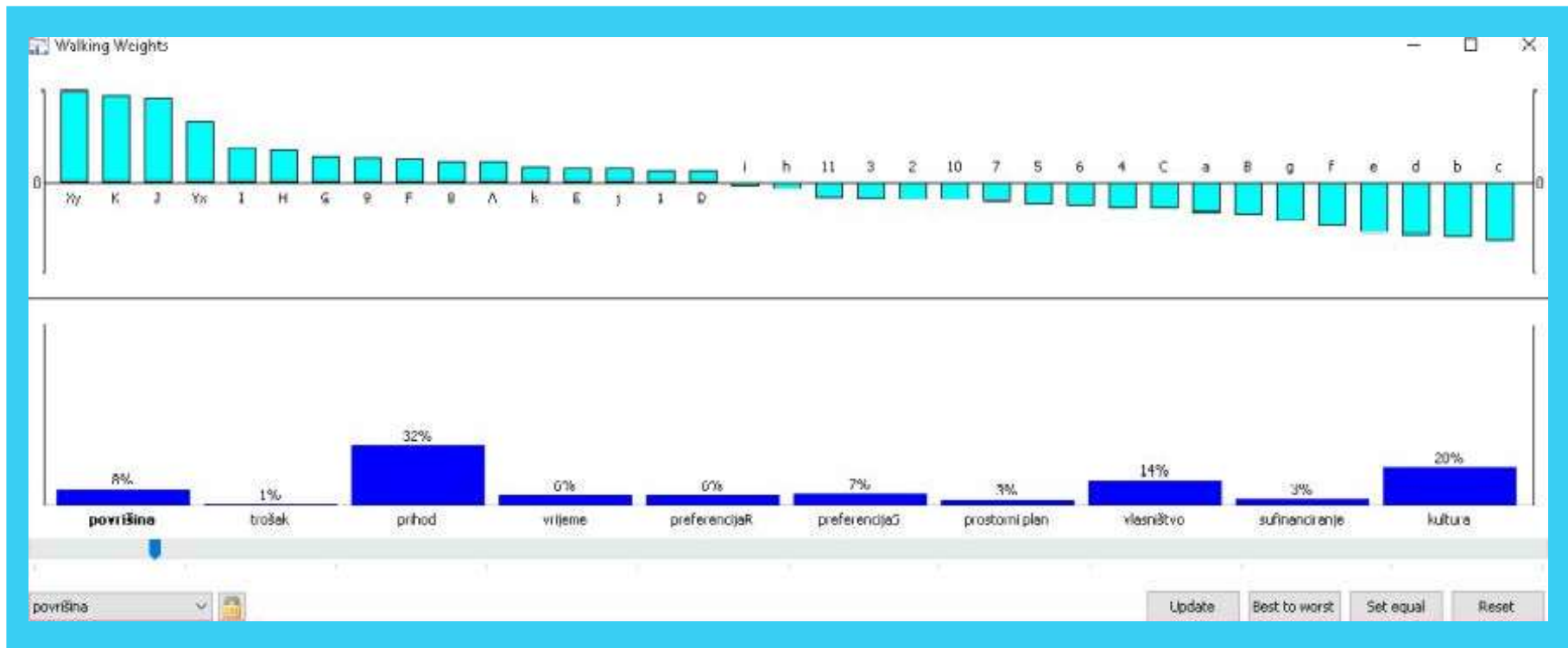
grafički prikaz rangiranja varijantnih rješenja

usporedba varijantnih rješenja

PROMETHEE Flow Table

| | action | Phi | Phi+ | Phi- |
|----|--------|--------|--------|--------|
| 1 | Xy | 0,2600 | 0,3398 | 0,0798 |
| 2 | K | 0,2475 | 0,3511 | 0,1036 |
| 3 | J | 0,2424 | 0,3454 | 0,1030 |
| 4 | Yx | 0,1754 | 0,2620 | 0,0865 |
| 5 | I | 0,0978 | 0,2168 | 0,1189 |
| 6 | H | 0,0881 | 0,2126 | 0,1245 |
| 7 | G | 0,0713 | 0,2460 | 0,1747 |
| 8 | 9 | 0,0667 | 0,2349 | 0,1682 |
| 9 | F | 0,0616 | 0,2419 | 0,1803 |
| 10 | B | 0,0570 | 0,2320 | 0,1750 |
| 11 | A | 0,0557 | 0,1795 | 0,1243 |
| 12 | k | 0,0411 | 0,1797 | 0,1386 |
| 13 | E | 0,0387 | 0,2125 | 0,1738 |

tablični prikaz rangiranja varijantnih rješenja



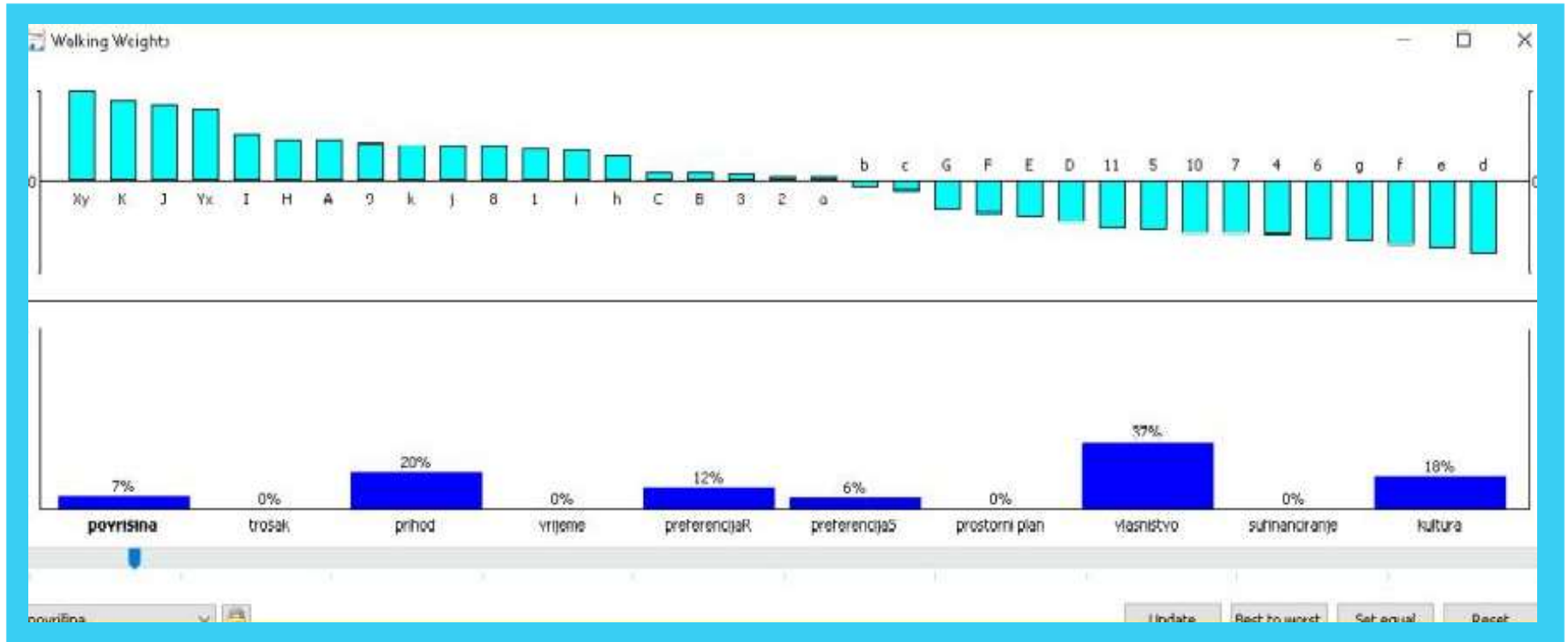
grafički prikaz rangiranja varijantnih rješenja i stupićasti odnos težina kriterija i preferencija varijantnih rješenja

| | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
|--------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| kriterij | površina | trošak | prihod | vršene | preferencijaR | preferencijaS | prostorni plan | vlasništvo | sufinansiranje | kultura |
| Unit | m2 | € | € | mjeseci | učjena | učjena | da/ne | da/ne | da/ne | m2 |
| Cluster/Group | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ | ◆ |
| Preferences | | | | | | | | | | |
| Min/Max | max | min | max | min | max | max | max | max | max | max |
| Weight | 0,33 | 1,00 | 32,33 | 6,00 | 5,66 | 6,66 | 2,66 | 14,00 | 3,33 | 20,00 |
| Preference Fn. | V-shape | V-shape | V-shape | V-shape | V-shape | V-shape | Usual | Usual | Usual | V-shape |
| Thresholds | absolute | absolute | absolute | absolute | absolute | absolute | absolute | absolute | absolute | absolute |
| - Q: Indifference | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| - P: Preference | 6200 | € 21.392.800 | € 4.840.000 | 9 | 120 | 75 | n/a | n/a | n/a | 4910 |
| - S: Gaussian | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Statistics | | | | | | | | | | |
| Minimum | 1800 | € 6.679.200 | € 0 | 15 | 50 | 25 | 0 | 0 | 0 | 190 |
| Maximum | 8000 | € 26.072.000 | € 4.840.000 | 24 | 170 | 100 | 1 | 1 | 1 | 5100 |
| Average | 4632 | € 16.792.234 | € 2.054.499 | 18 | 88 | 67 | 0 | 1 | 1 | 1651 |
| Standard Dev. | 1677 | € 5.648.209 | € 1.646.066 | 2 | 28 | 26 | 0 | 0 | 0 | 1515 |
| Evaluations | | | | | | | | | | |

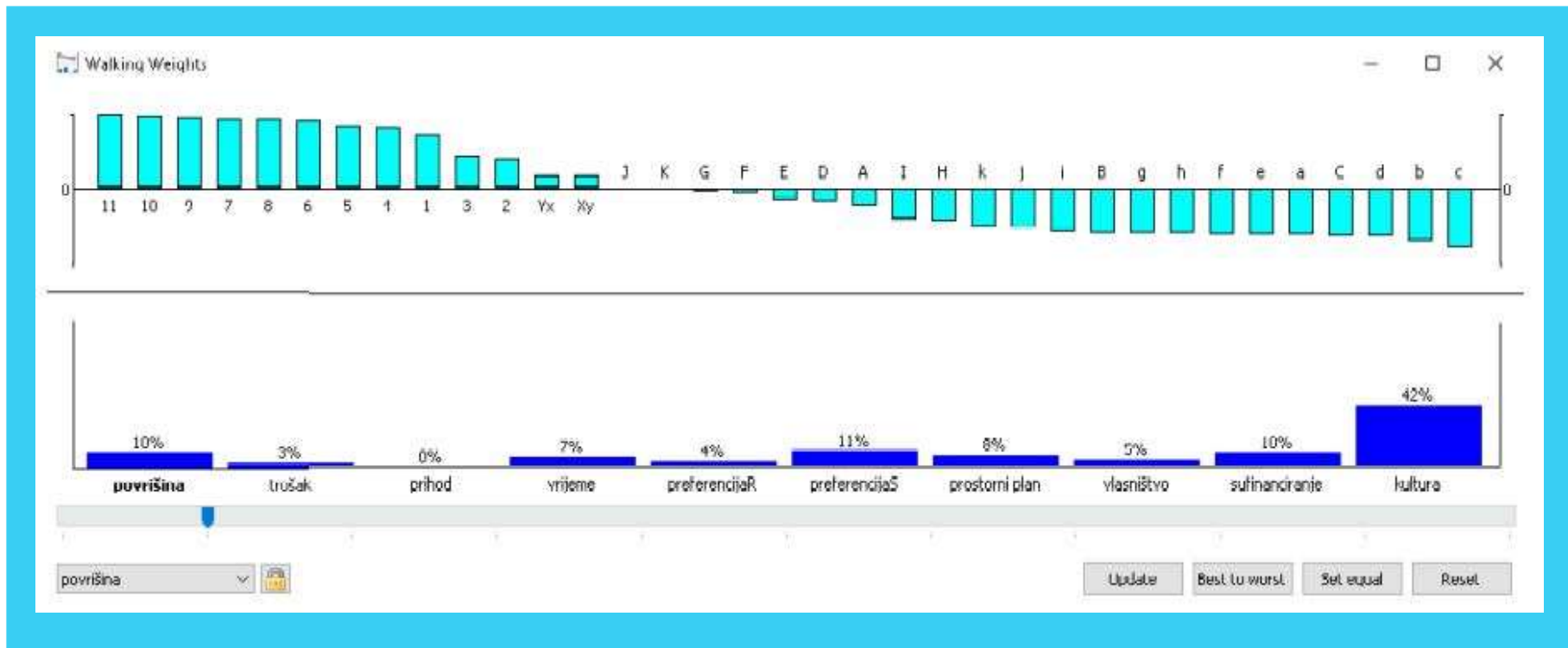
| | | | | | | | | | | | |
|-------------------------------------|----|------|--------------|-------------|----|-----|-----|----|-----|-----|------|
| <input checked="" type="checkbox"/> | F | 700C | € 22.36C.800 | € 4.235.000 | 22 | 70 | 50 | no | no | yes | 2140 |
| <input checked="" type="checkbox"/> | G | 700C | € 22.36C.800 | € 4.235.000 | 22 | 90 | 50 | no | no | yes | 2140 |
| <input checked="" type="checkbox"/> | H | 500C | € 2C.32E.000 | € 3.630.000 | 19 | 70 | 50 | no | yes | no | 9E0 |
| <input checked="" type="checkbox"/> | J | 300C | € 2E.072.000 | € 4.840.000 | 24 | 100 | 70 | no | yes | yes | 13C0 |
| <input checked="" type="checkbox"/> | K | 300C | € 2E.072.000 | € 4.840.000 | 24 | 120 | 55 | no | yes | yes | 13C0 |
| <input checked="" type="checkbox"/> | Yx | 500C | € 2C.202.000 | € 2.904.000 | 19 | 170 | 130 | no | yes | yes | 12C0 |
| <input checked="" type="checkbox"/> | Yy | 700C | € 2E.652.000 | € 4.188.000 | 22 | 170 | 130 | no | yes | yes | 13C0 |

grafički prikaz rangiranja varijantnih rješenja i odabir 4 najbolja

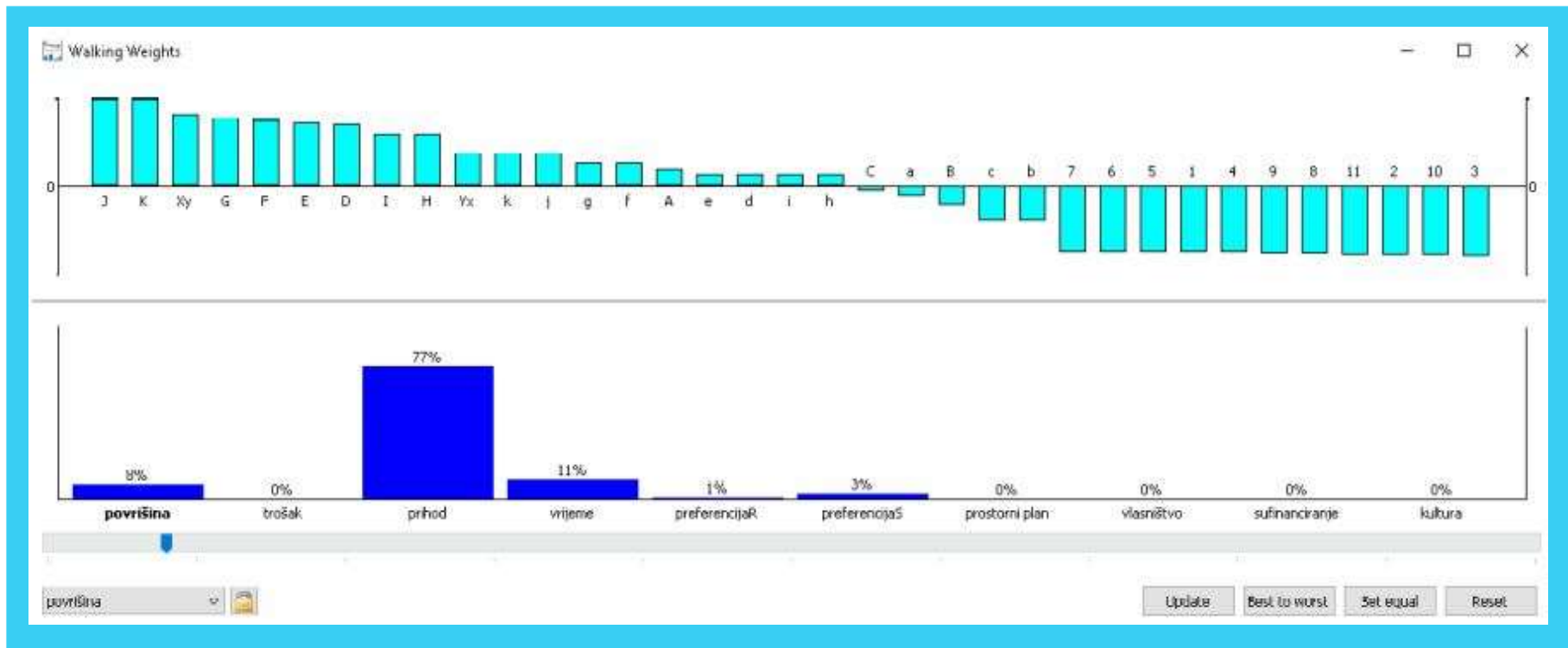
raličiti scenariji



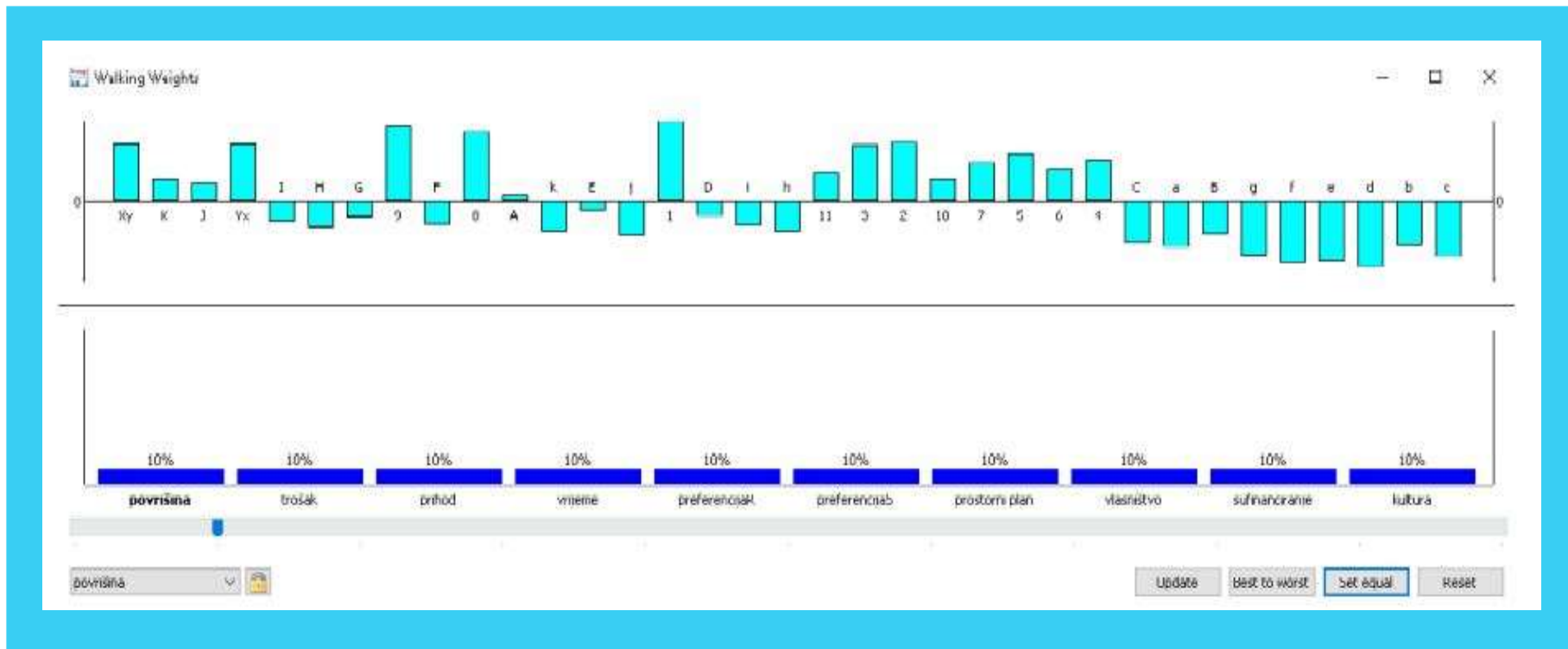
prikaz „walking weights” – stupičasti odnos težina kriterija i preferencija varijantnih rješenja u pogledu Crkve



prikaz „walking weights” – stupičasti odnos težina kriterija i preferencija varijantnih rješenja u pogledu grada



prikaz „walking weights” – stupičasti odnos težina kriterija i preferencija varijantnih rješenja u pogledu investitora

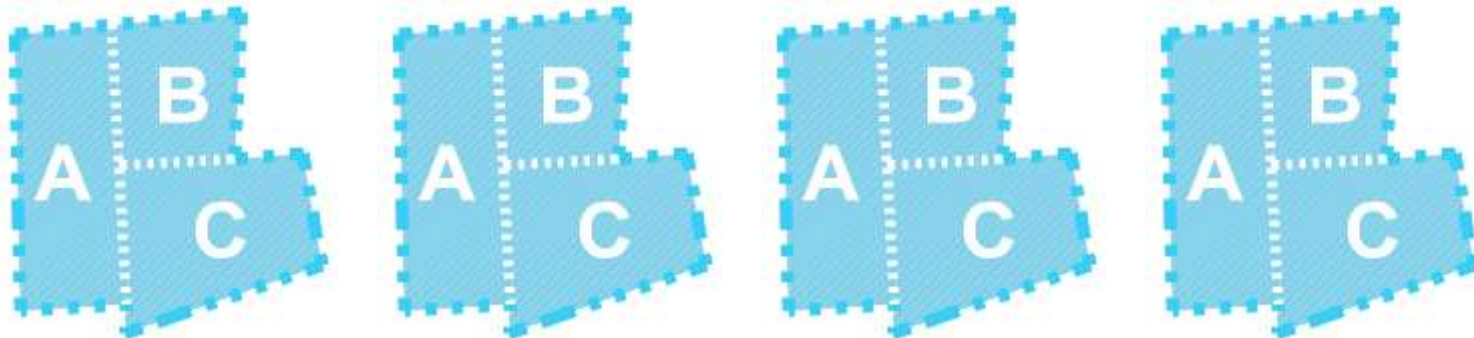


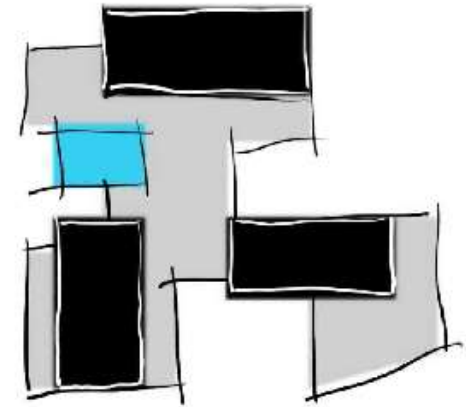
prikaz „walking weights” – stupičasti odnos težina kriterija i preferencija varijantnih rješenja, svi kriteriji su jednaki!

zaključak

varijanta XY

| | |
|--------------|---------------------|
| grad - | 1500 m ² |
| Crkva - | 500 m ² |
| investitor - | 5000m ² |





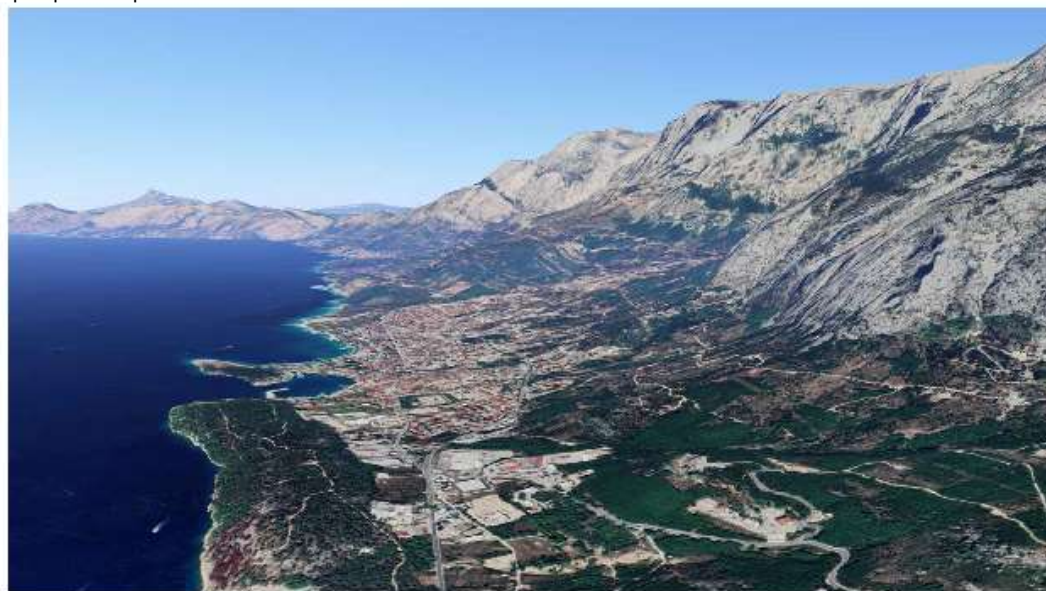
IDEJNI PROJEKT CENTAR URBANE KULTURE **SINKOŠA**

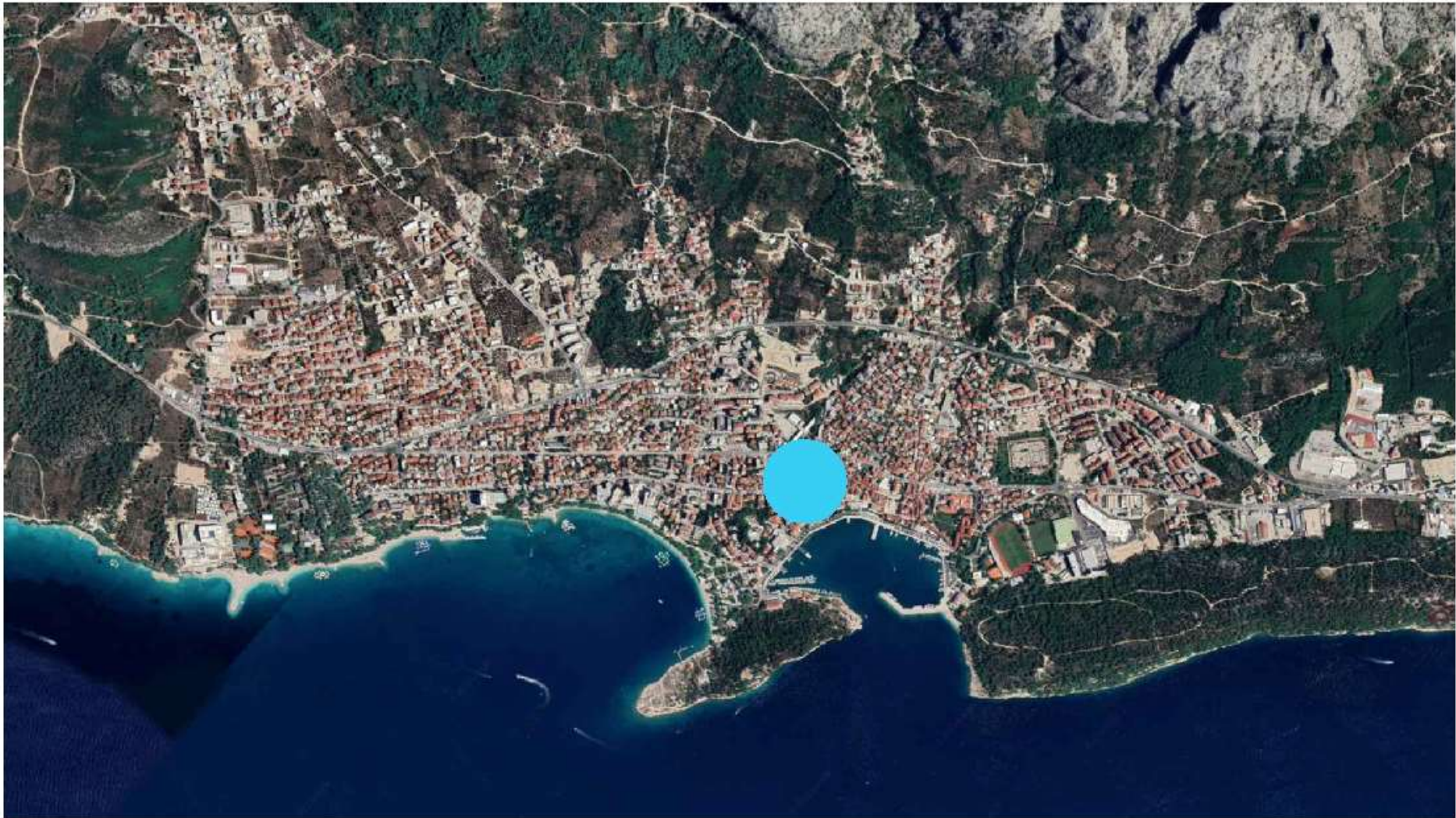


Položaj Makarske na karti Hrvatske



perspektivni prikaz Makarske





položaj odabrane parcele u Makarskoj



položaj parcele na orto foto snimci Makarske



položaj parcele na orto foto snimci Makarske



STAMBENJAK/HOTEL



ZVONIK/SPOMENIK

Analiza makarskih „nebođera”



Fotografija iz traka užeg obuhvata

urbanistička analiza užeg obuhvata



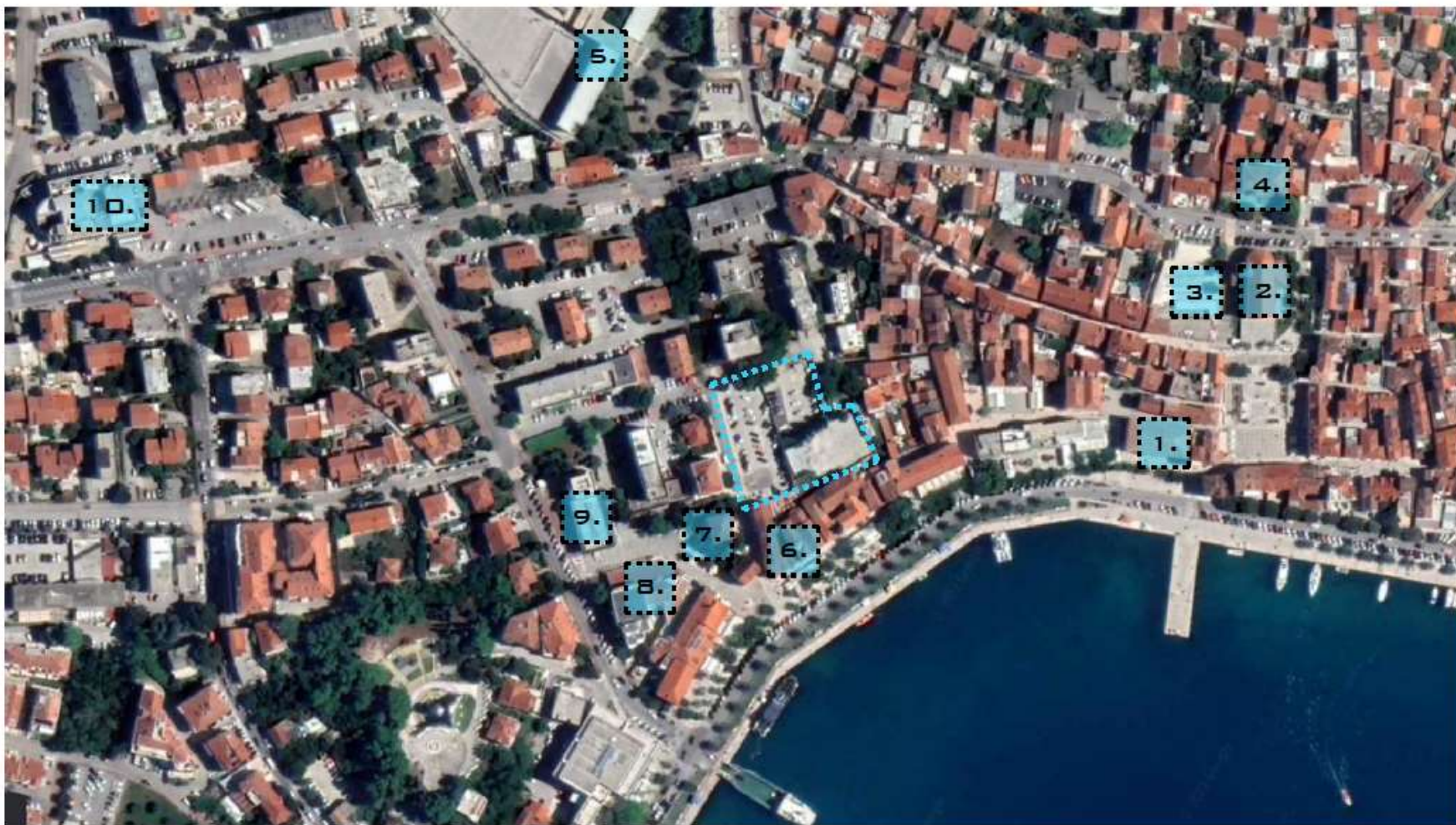
OBUH VAT



ŠTAPIČASTI URBANIZAM



STARA JEZGRA GRADA



Analiza objekata društvene namjene

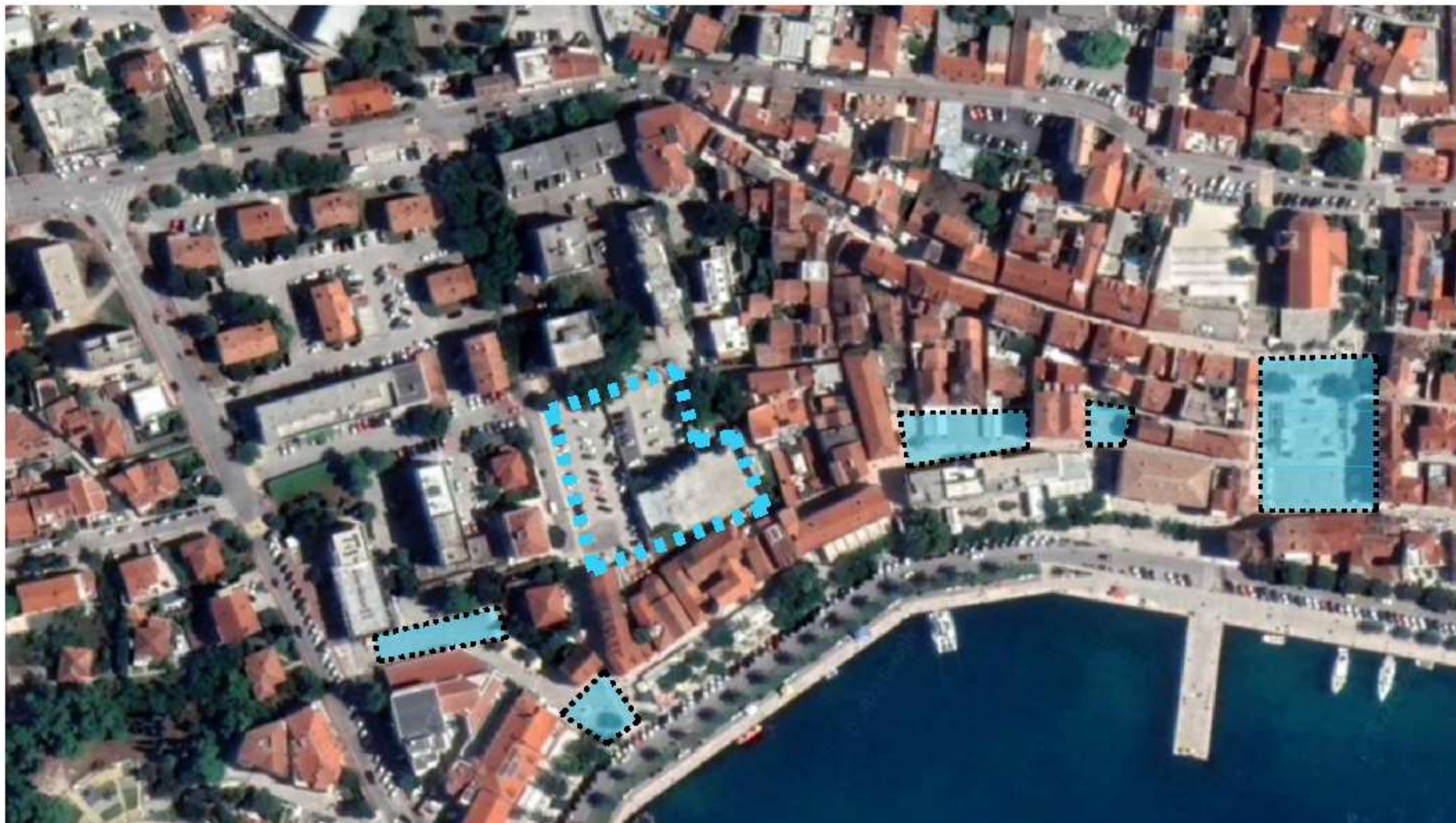


OBJEKTI DRUŠTVENIH NAMJENA



OBUHVAT

1. Općina 2. Crkva Sv. Marka 3. Tržnica na otvorenom 4. Glazbena škola 5. Osnovna škola
6. Crkva Sv. Filipa Nerija 7. Škola stranih jezika
8. Pošta 9. FINA 10. Autobusni kolodvor



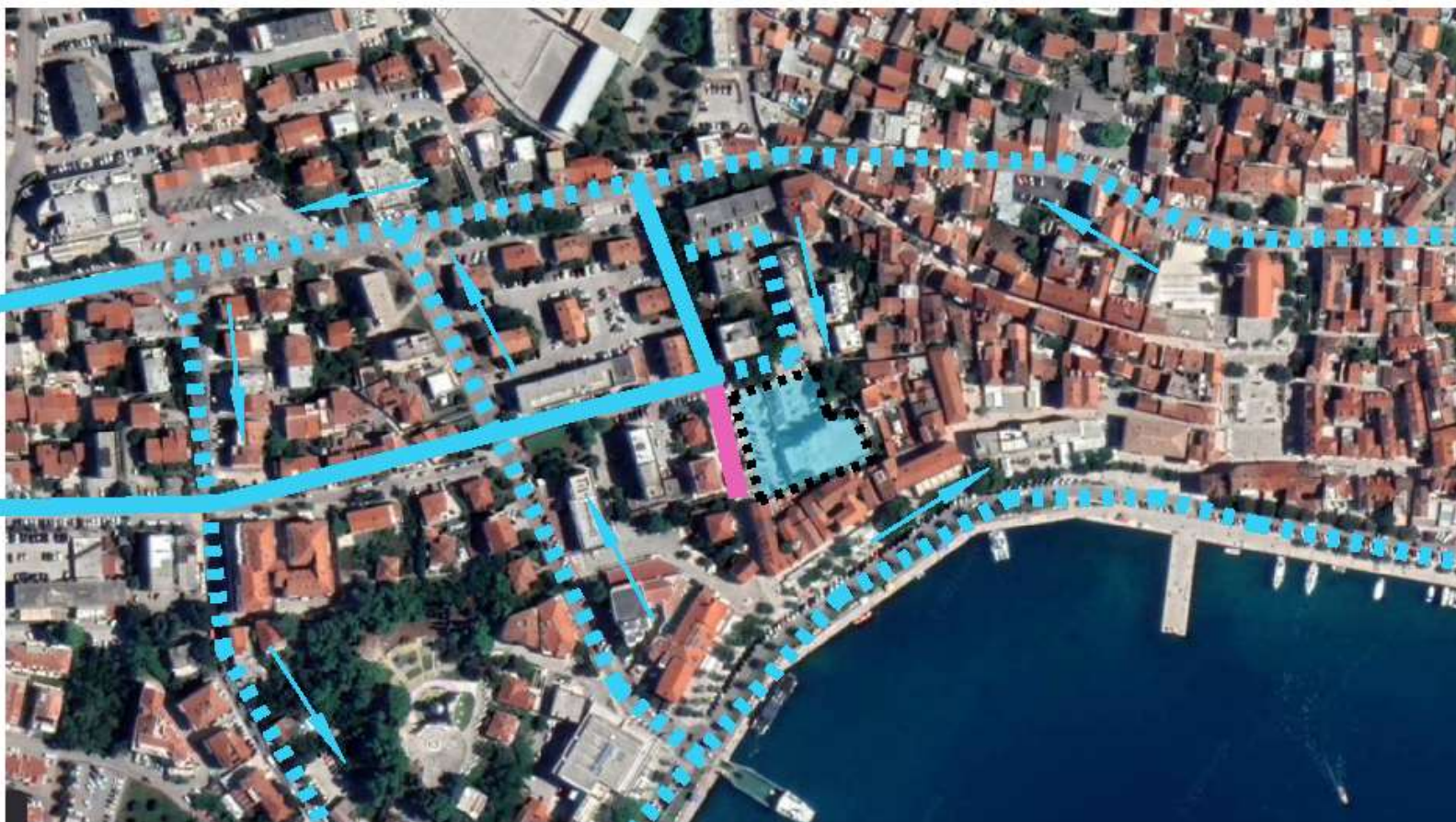
analiza veličina makarskih trgova



POSTOJEĆI TRGOVI



OBUHVAT



analiza kolnog prometa



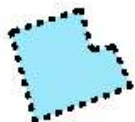
DVOUSMJERNA



JEDNOSMJERNA



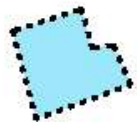
STOPIRANA ULICA



OBUHVAT



analiza pješačkog prometa



OBUHVAT



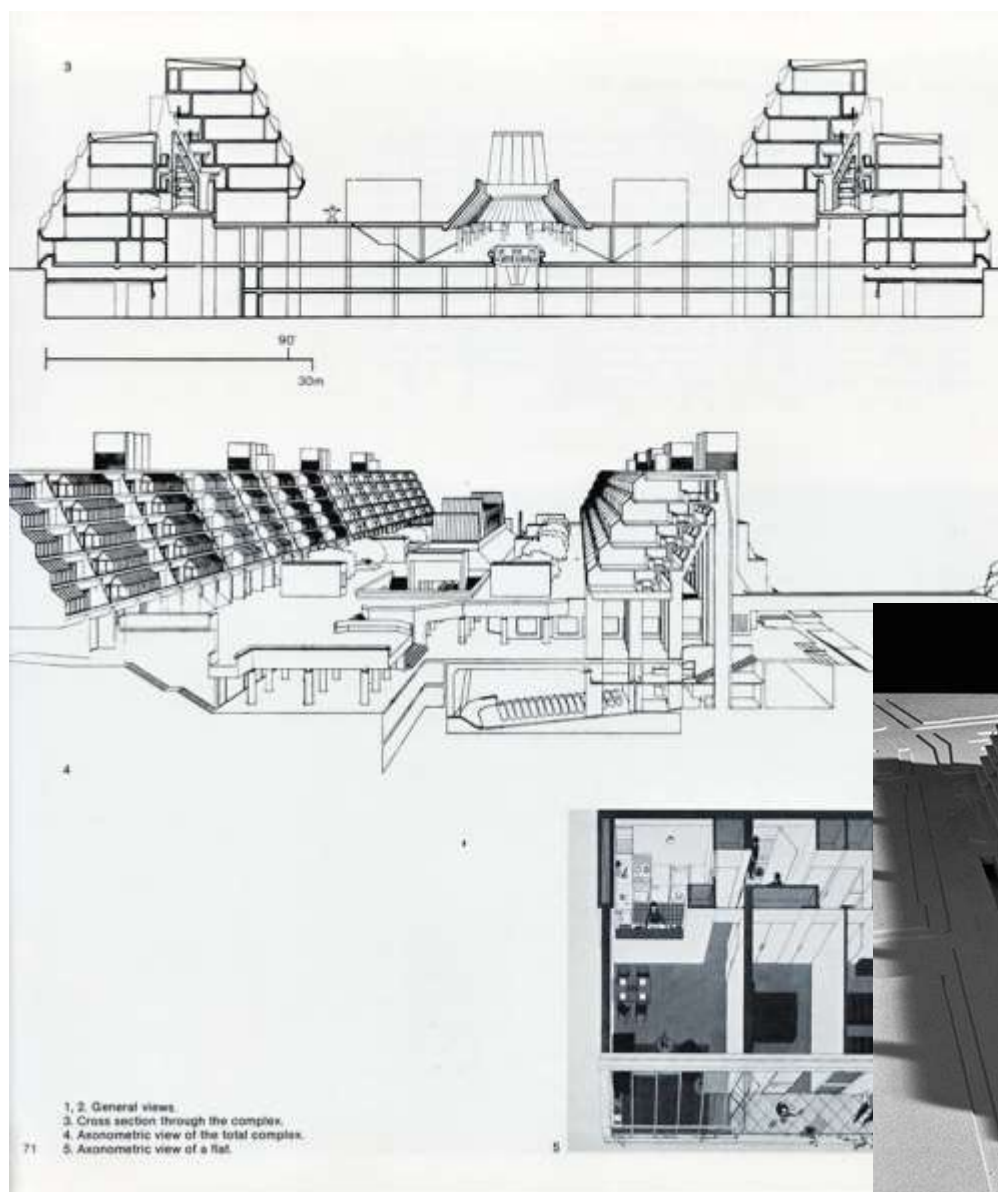
PJEŠAČKA OS



PRISTUP S JUGA KROZ BISKUPSKI DVOR

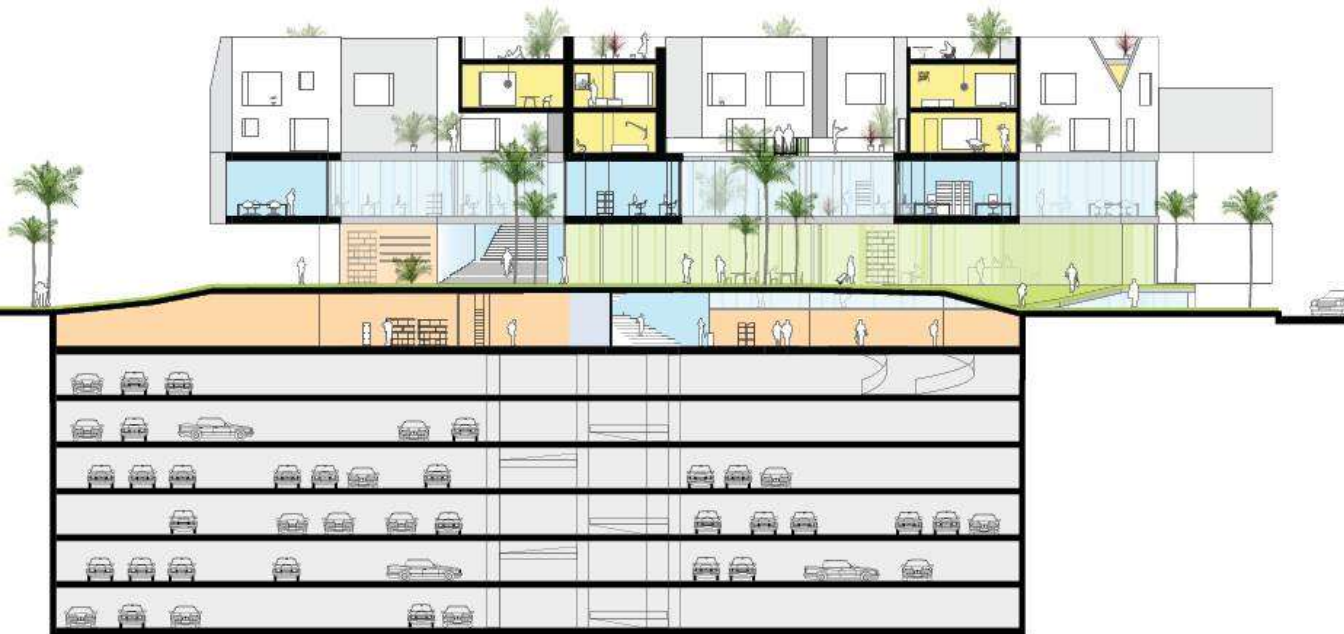


NAJPROMETNIJA PJEŠAČKA OS



PATRICK HODGKINSON, BRUNSWICK CENTRE, 1972.

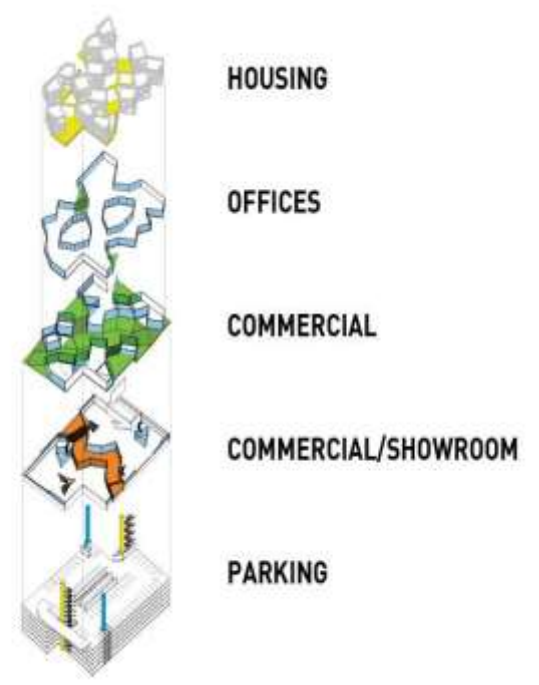




JULIEN DE SMEDT, ARCHITECTURAL MOUSSAKA, 2007.



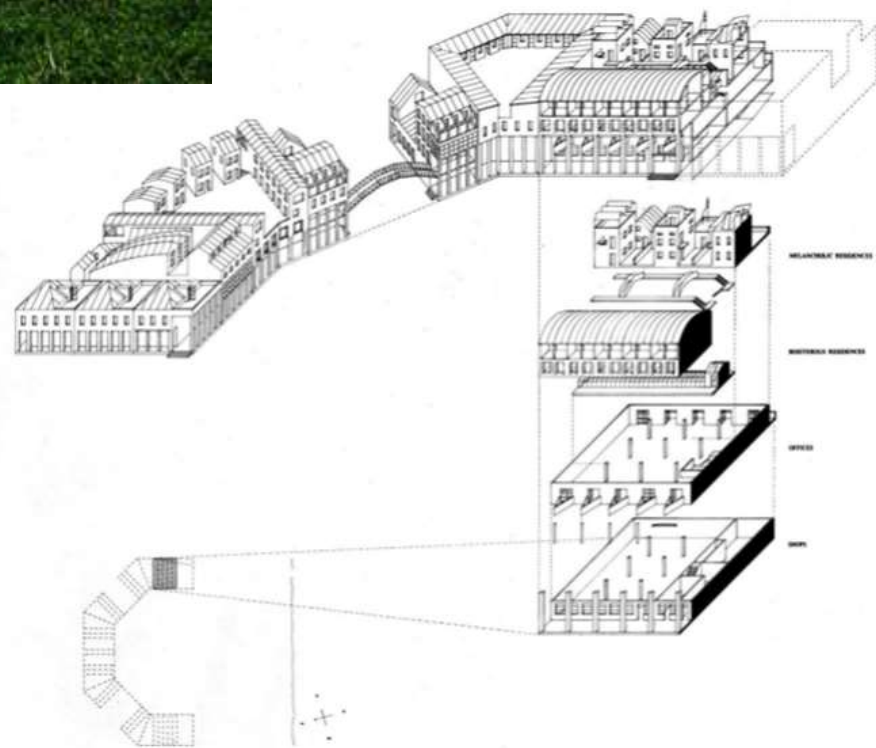
UNIST FGAG DSSA DIPLOMSKI RAD

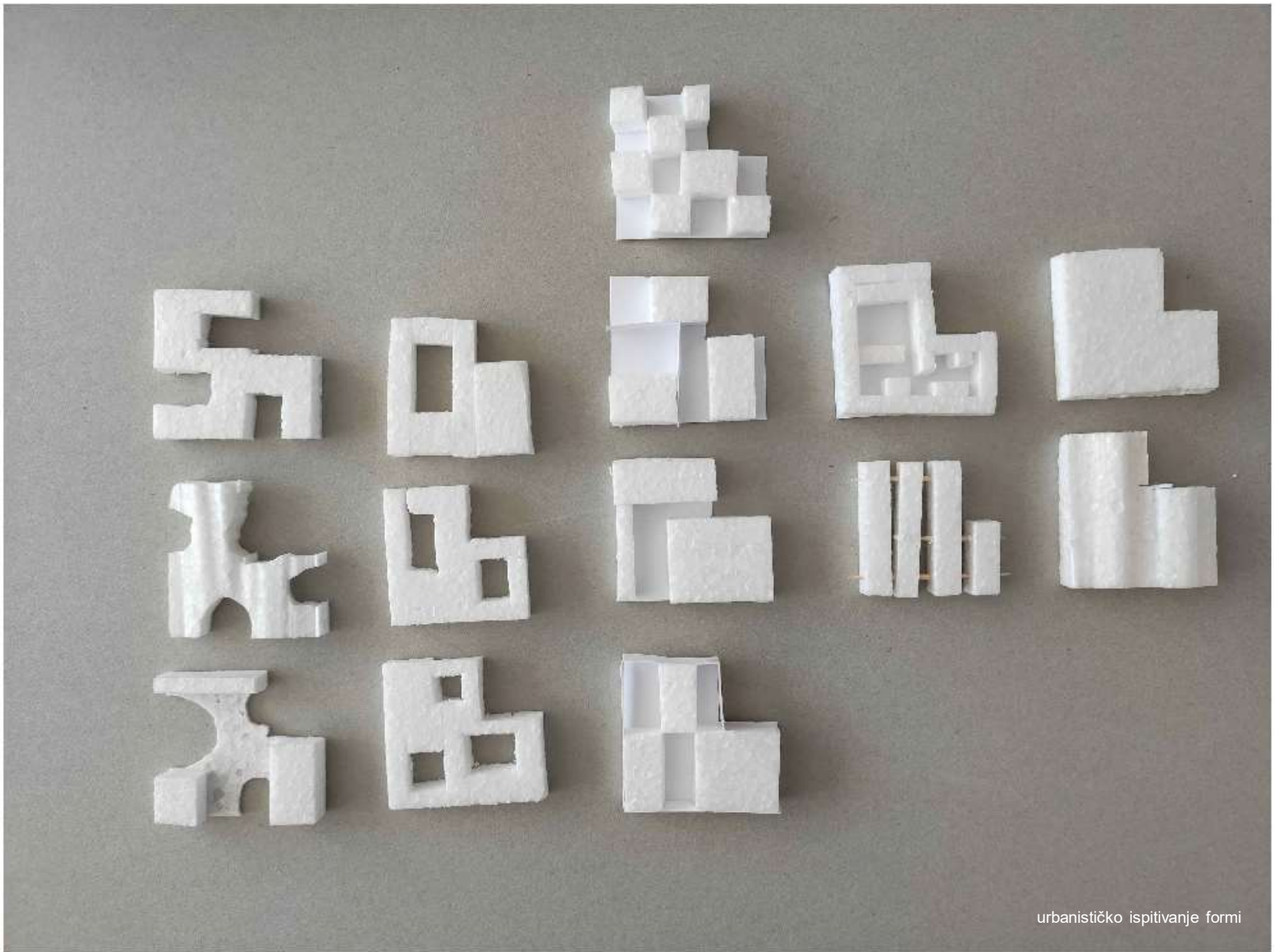


REFERENTNI PRIMJERI

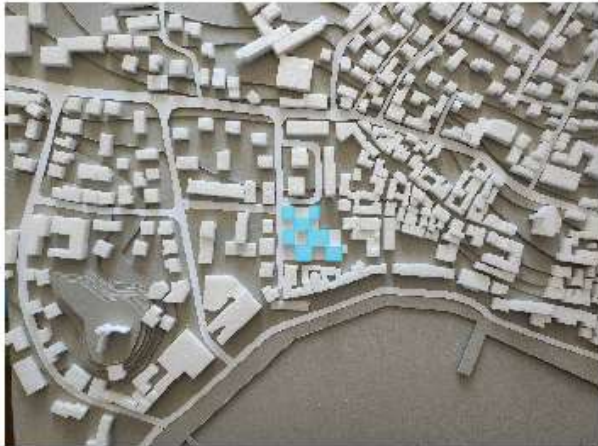


STEVEN HOLL, SEASIDE HYBRID, 1988.

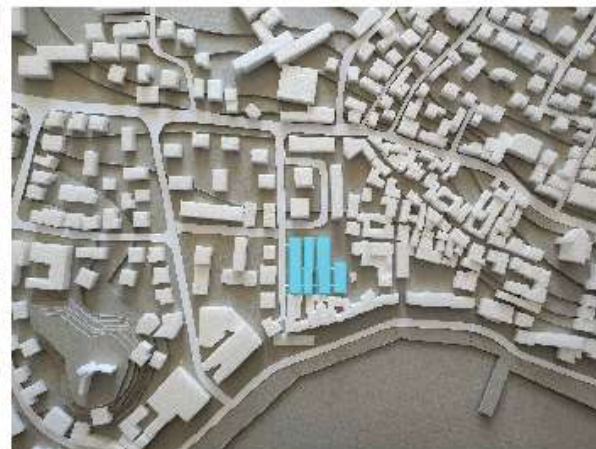
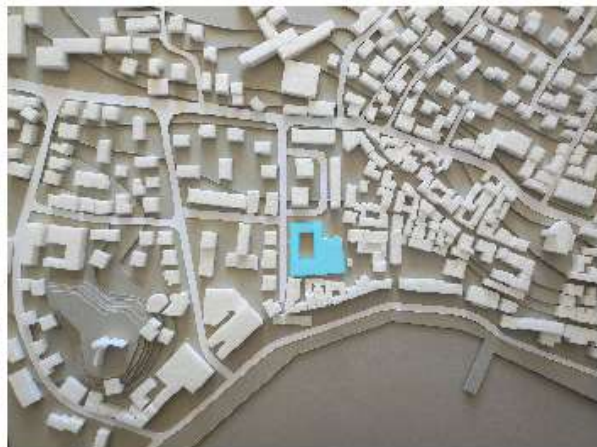




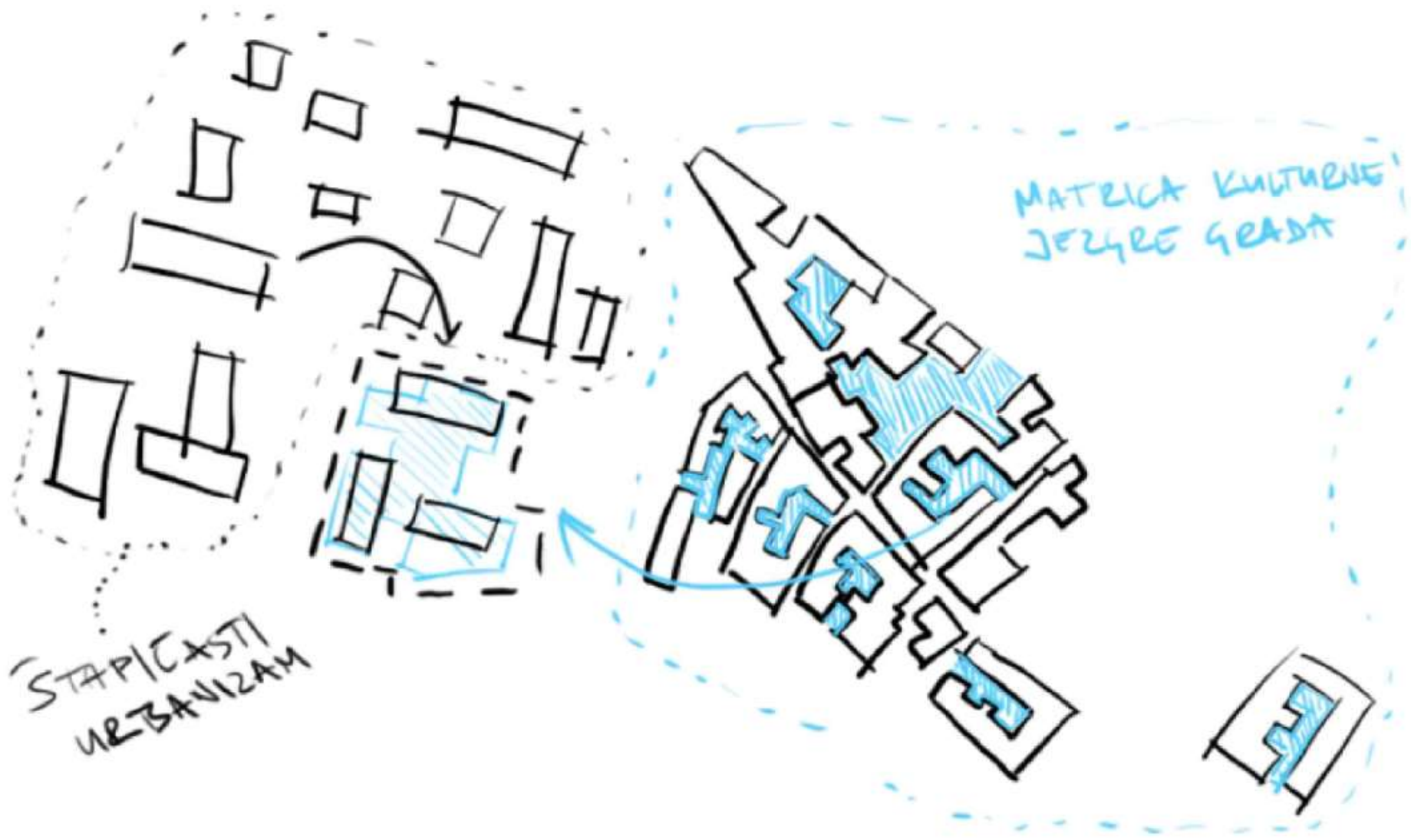
urbanističko ispitivanje formi



koncept na razini urbanizma



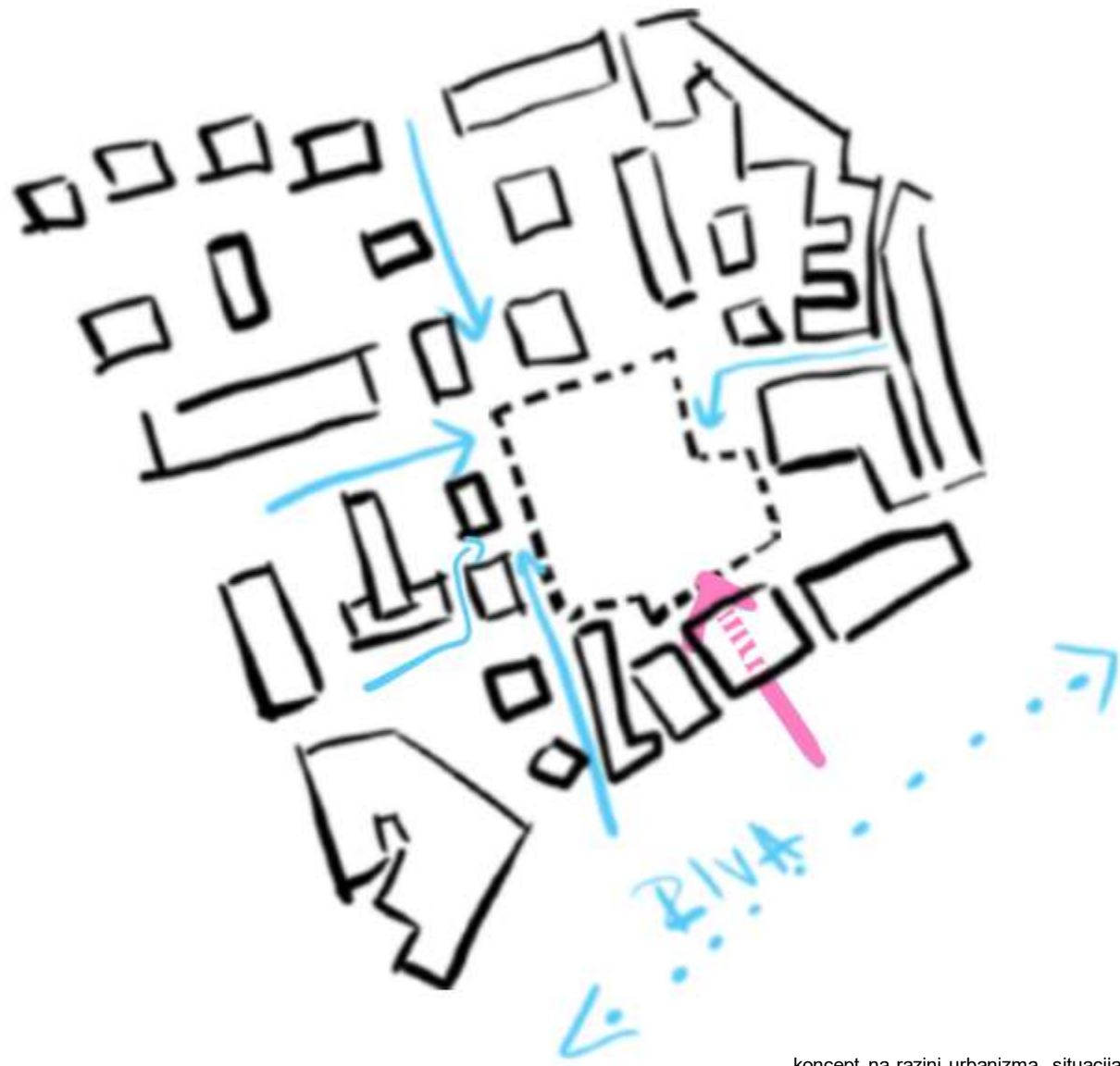
koncept na razini urbanizma



koncept na razini urbanizma



koncept na razini urbanizma, situacija



koncept na razini urbanizma, situacija sa pješačkim putevima



koncept na razini urbanizma, potencijalni novi pješački putevi



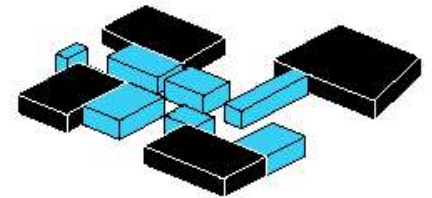
koncept na razini urbanizma, maksimalno iskorištavanje tlocrtnne površine parcele



koncept na razini urbanizma, oduzimanje od maksimalnog u vidu zasjeka otvaranje prema ulici pješačkim putevima



koncept na razini urbanizma, dodavanje lamela po uzoru na štapičasti urbanizam



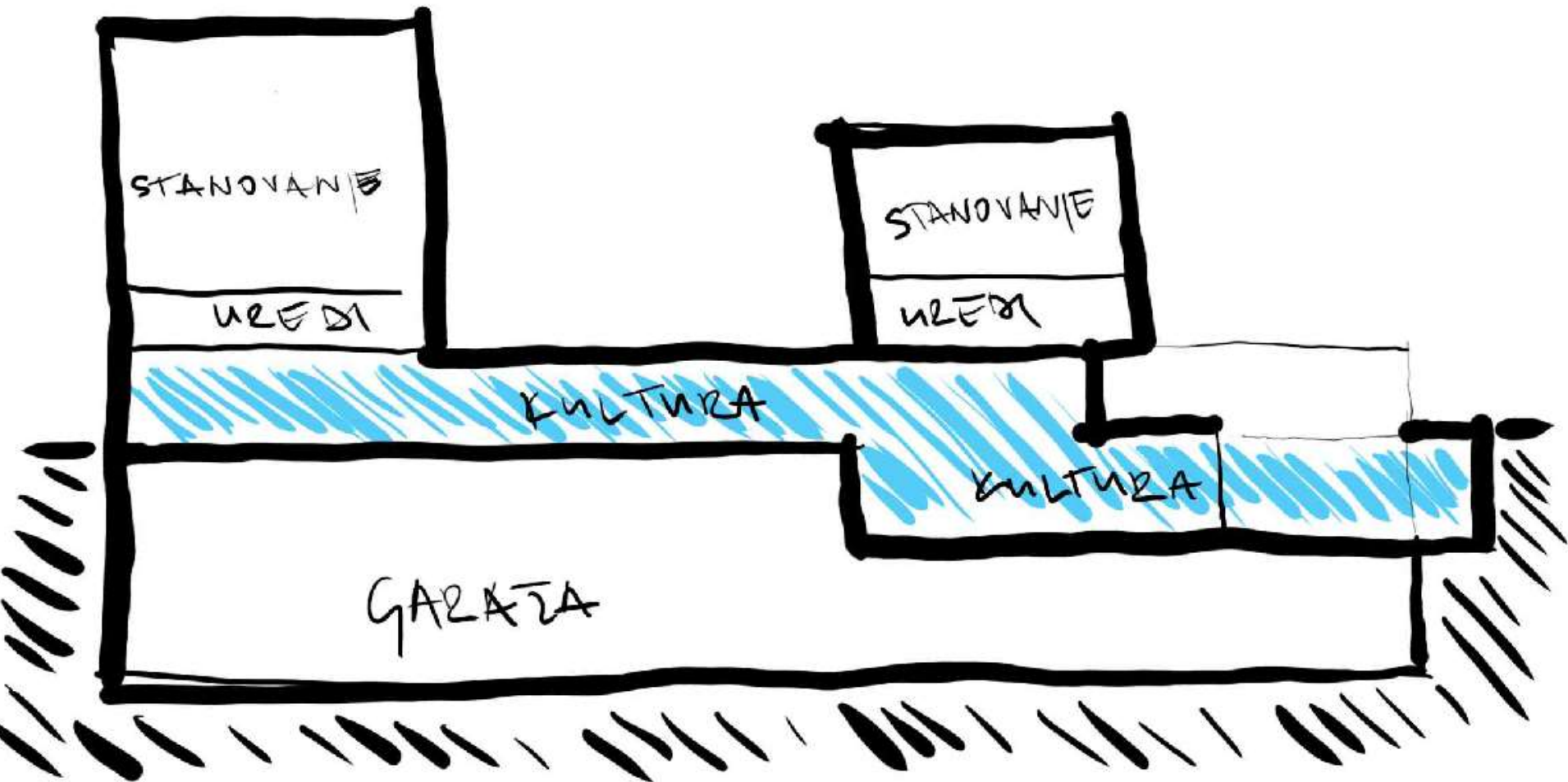
KOMERCIJALNO

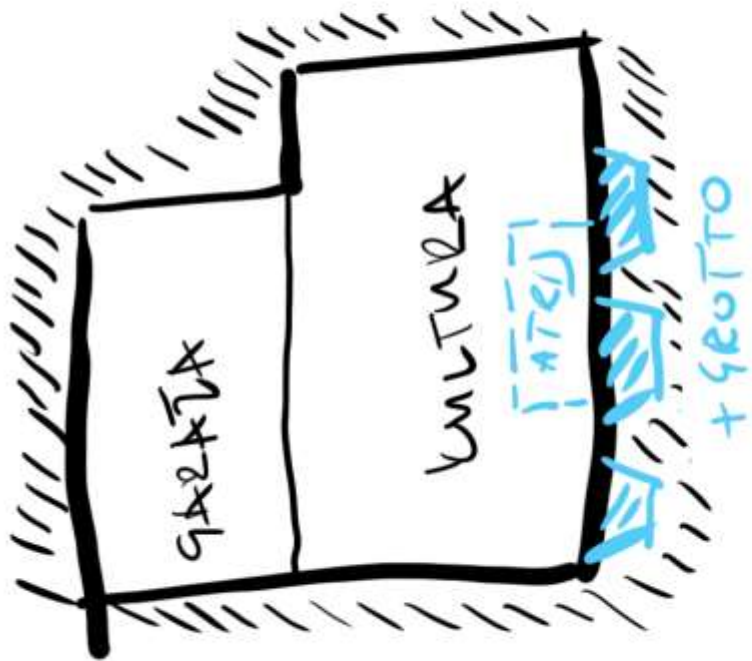
KULTURA

aksonometrijski prikaz partera

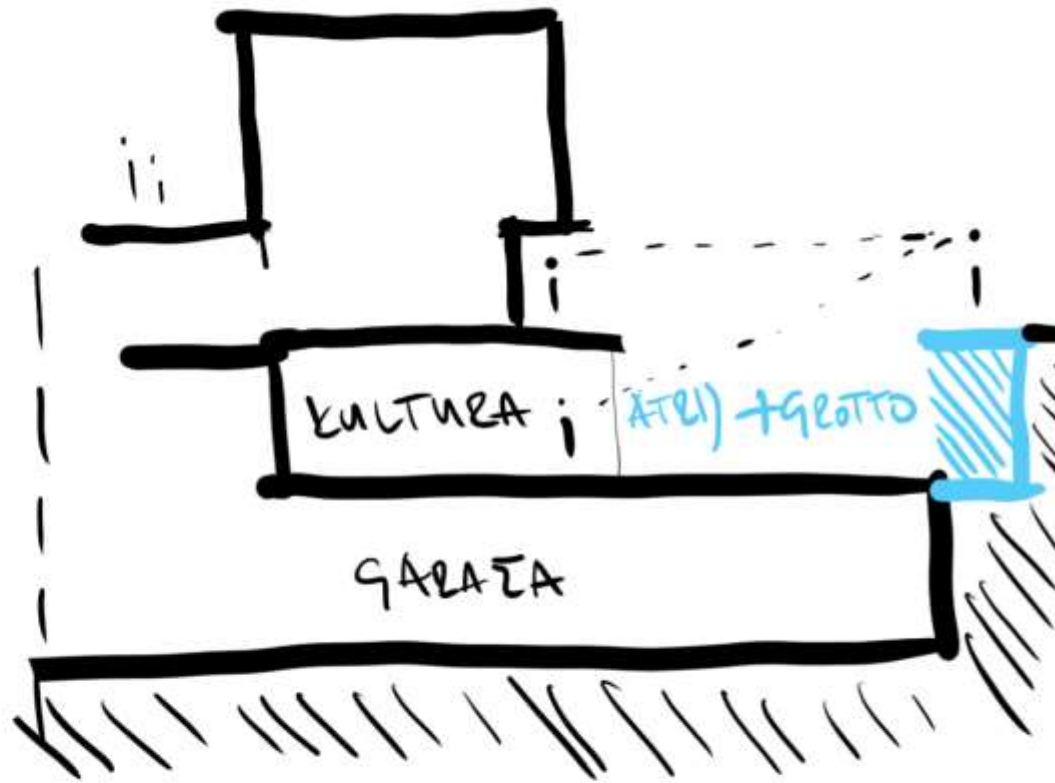
Shematska podjela na razini partera

shematska podjela programa po presjeku

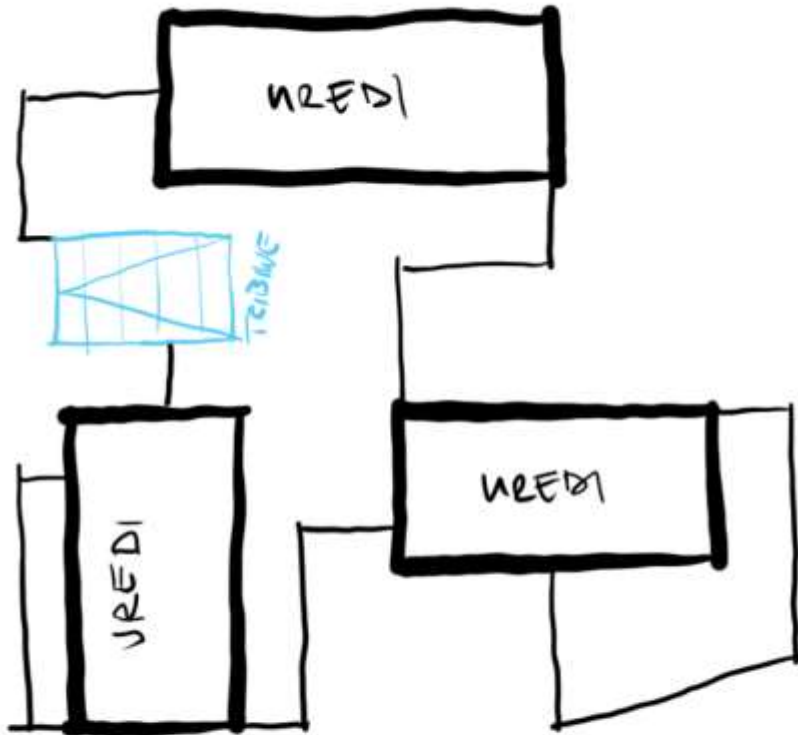




tlocrt, adicija grotto



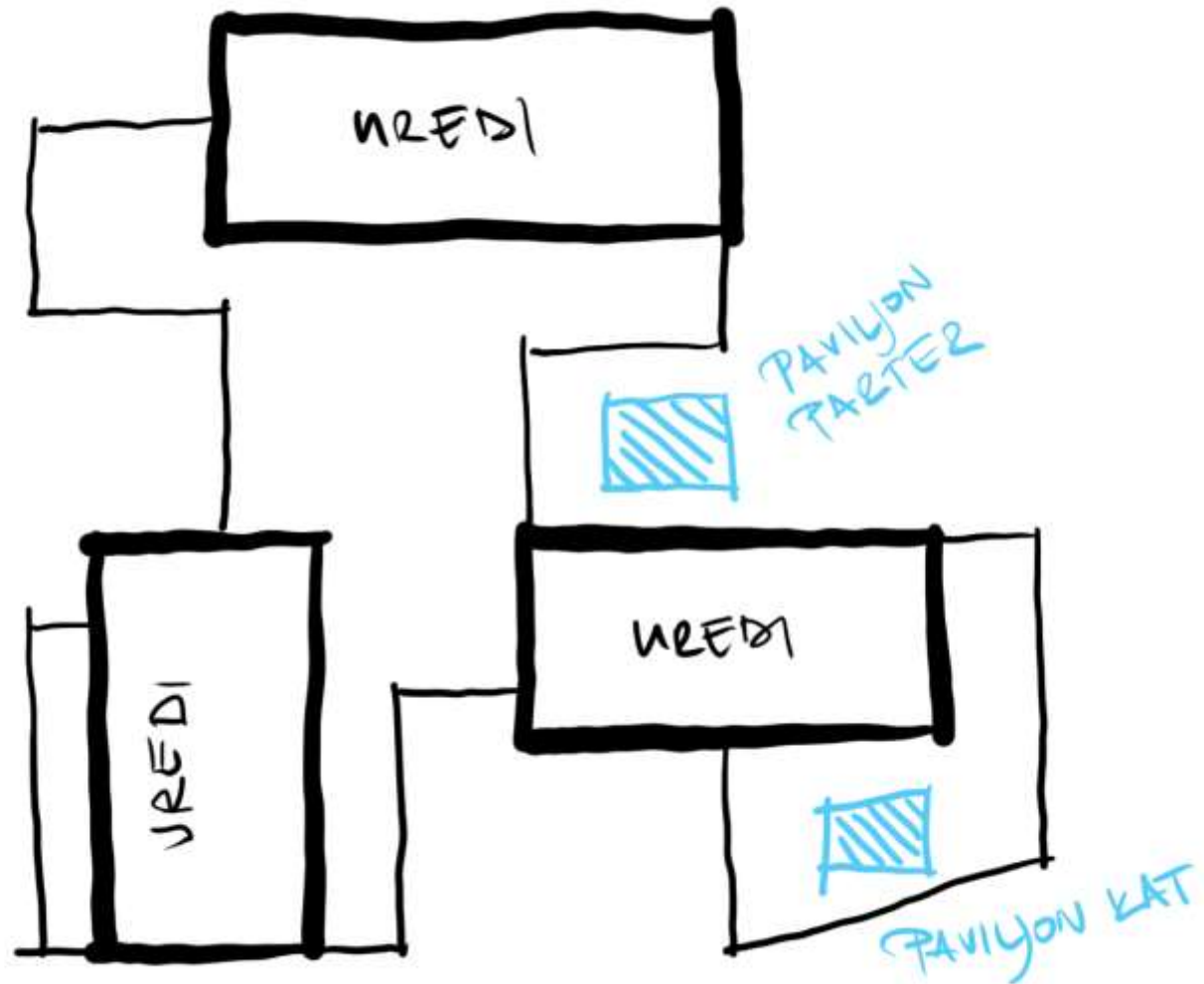
presjek, adicija grotto, vizualne konekcije



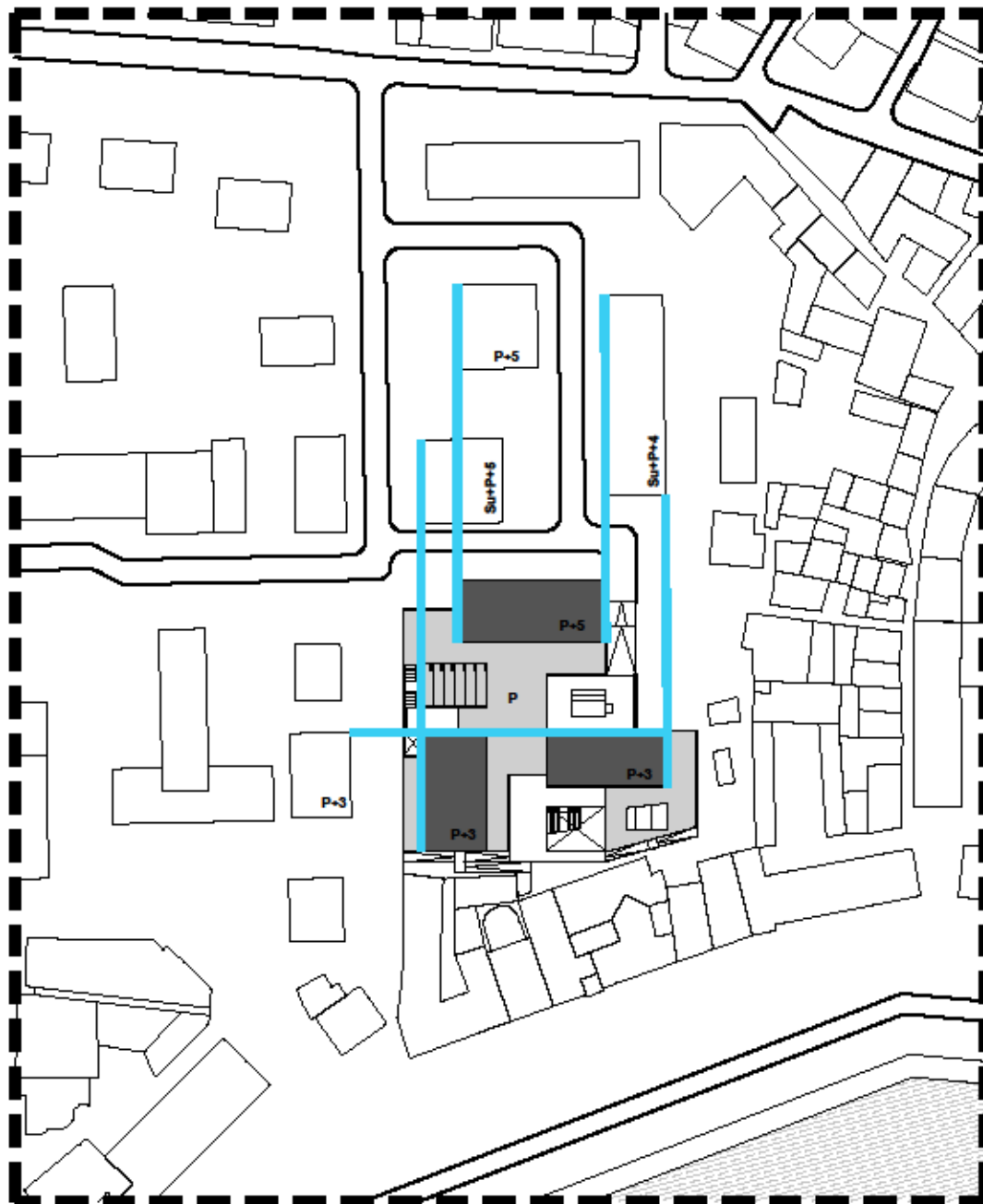
tlocrt, adicija tribina

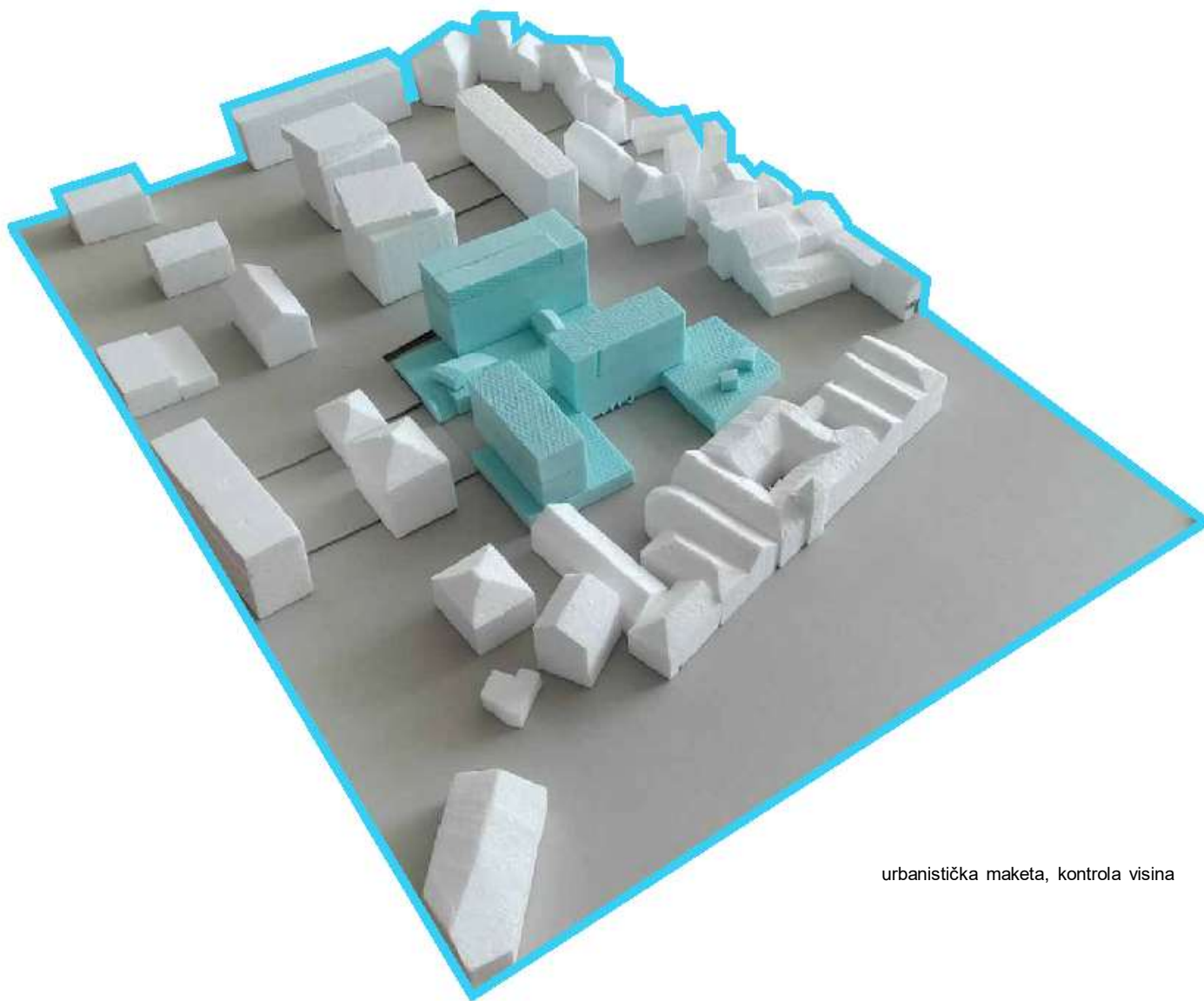


presjek, adicija adicija tribina, vizualne konekcije

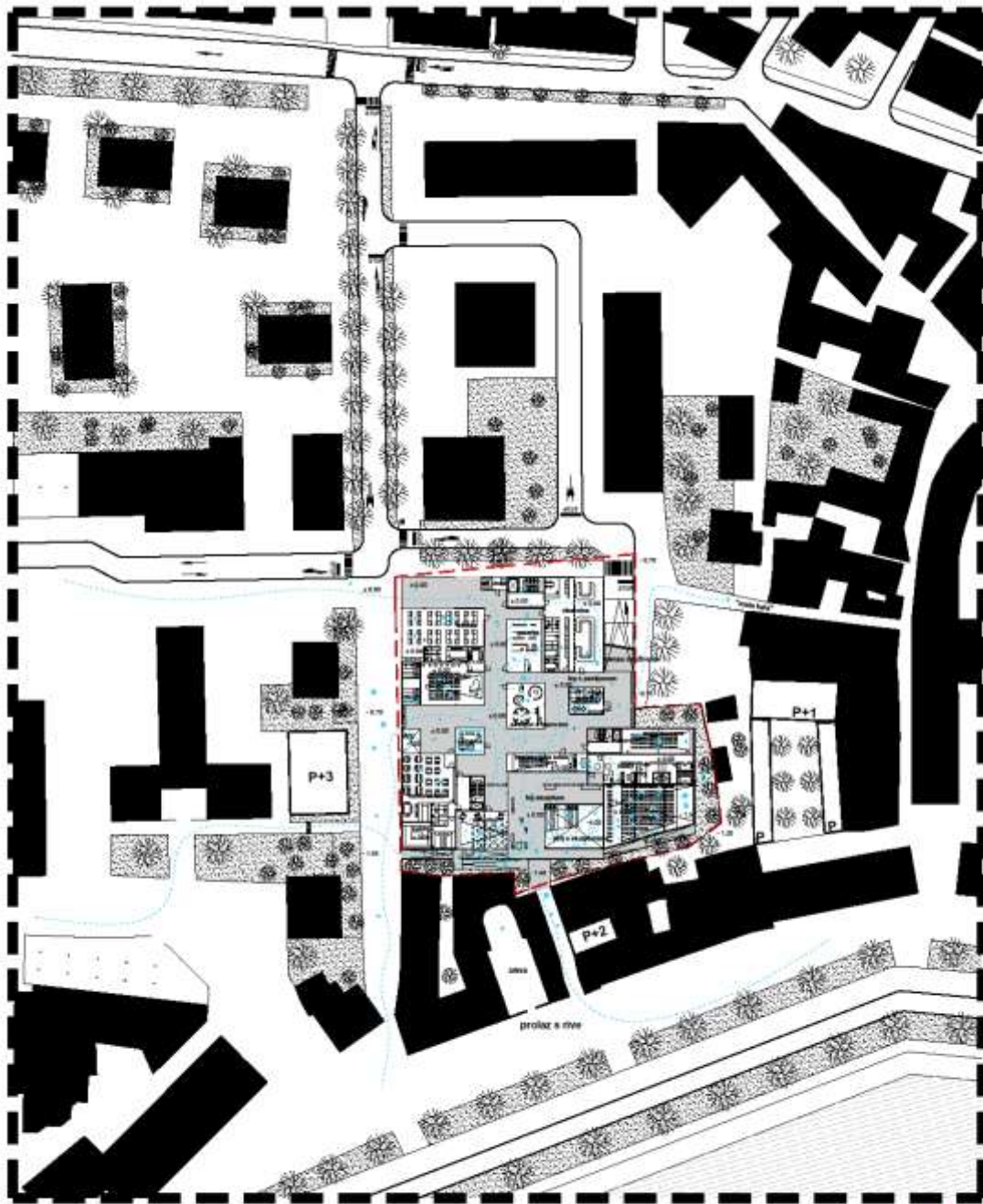


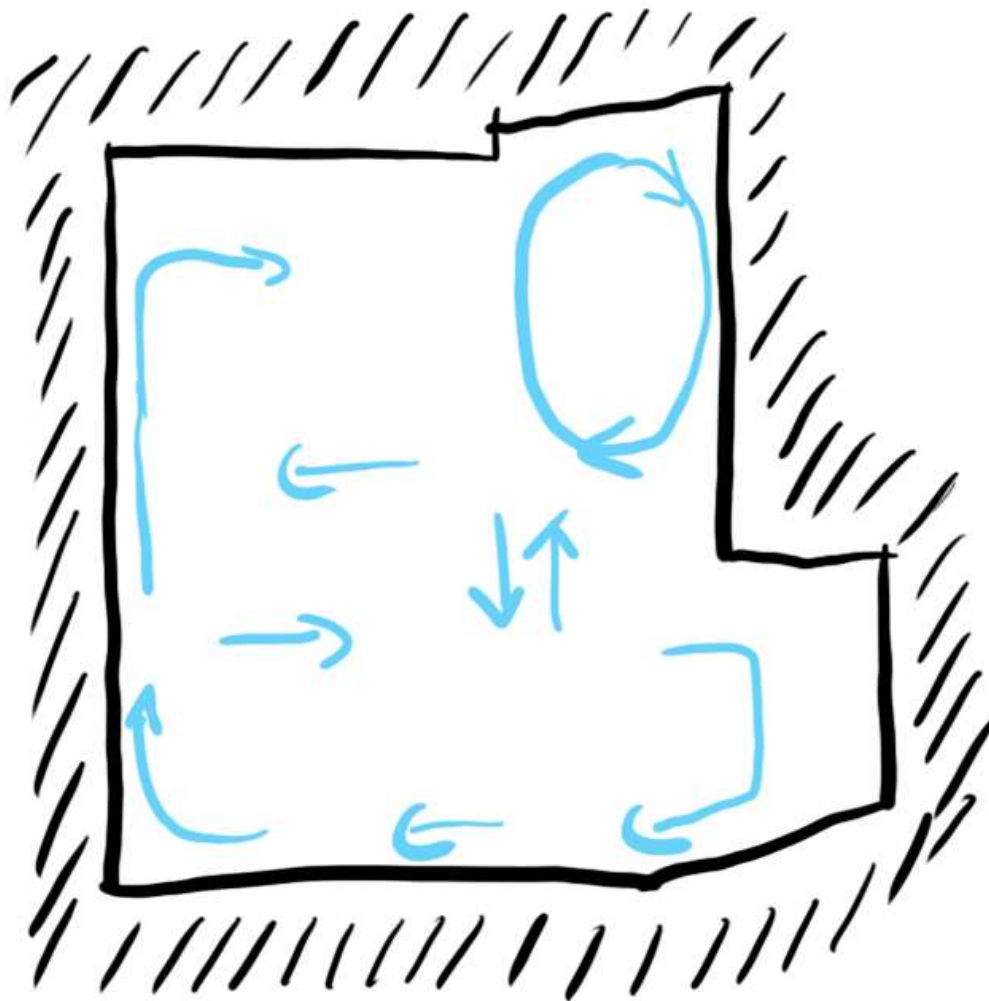
tlocrt, adicija paviljona



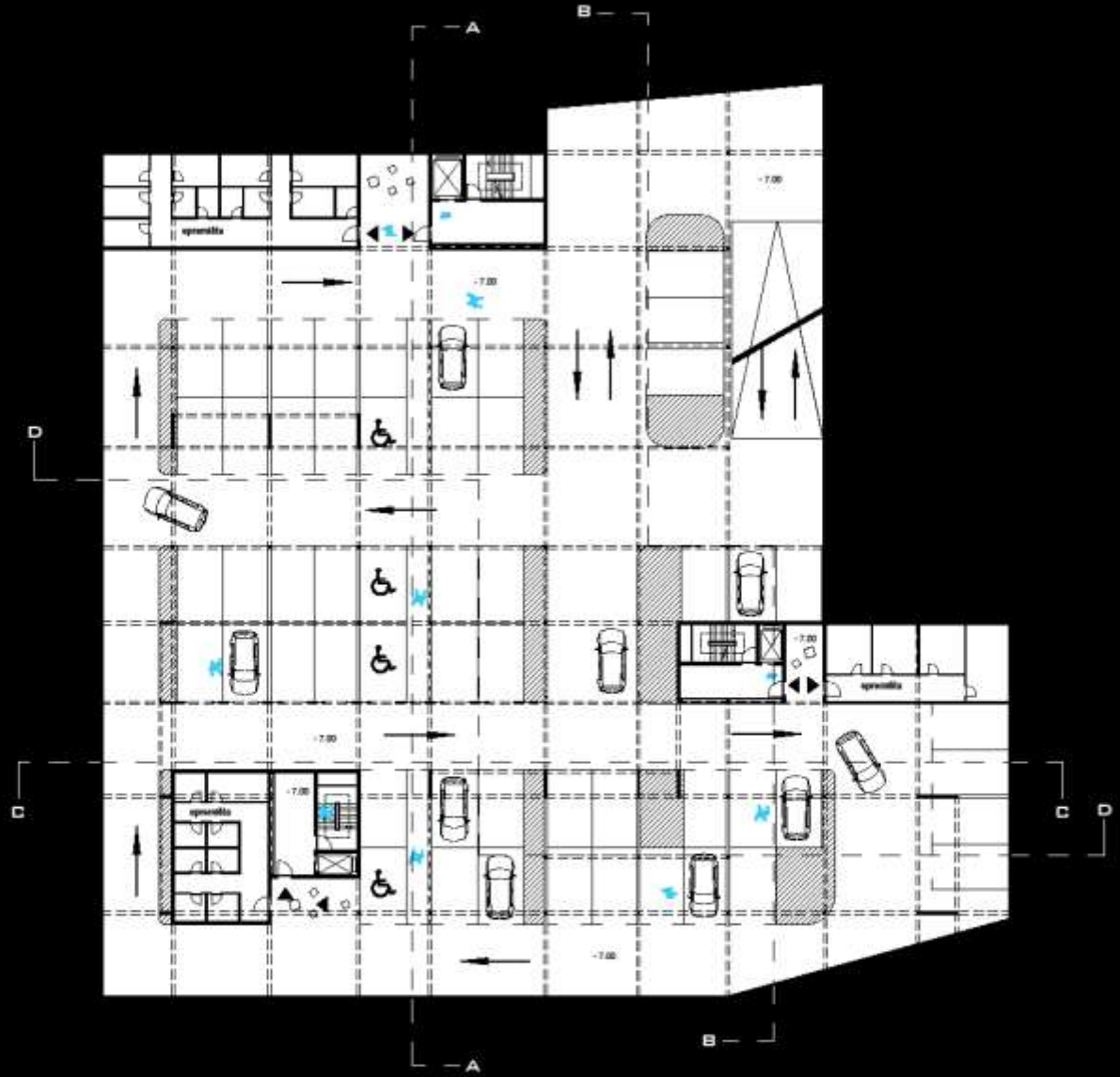


urbanistička maketa, kontrola visina





cirkulacija garaže





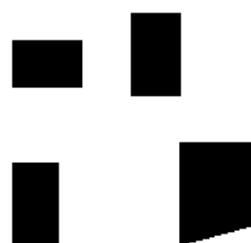
Shematski tlocrt organizacije programa na -1 etaži



ULICA



KULTURA



KOMERCIJALNO



CENTAR URBANE KULTURE





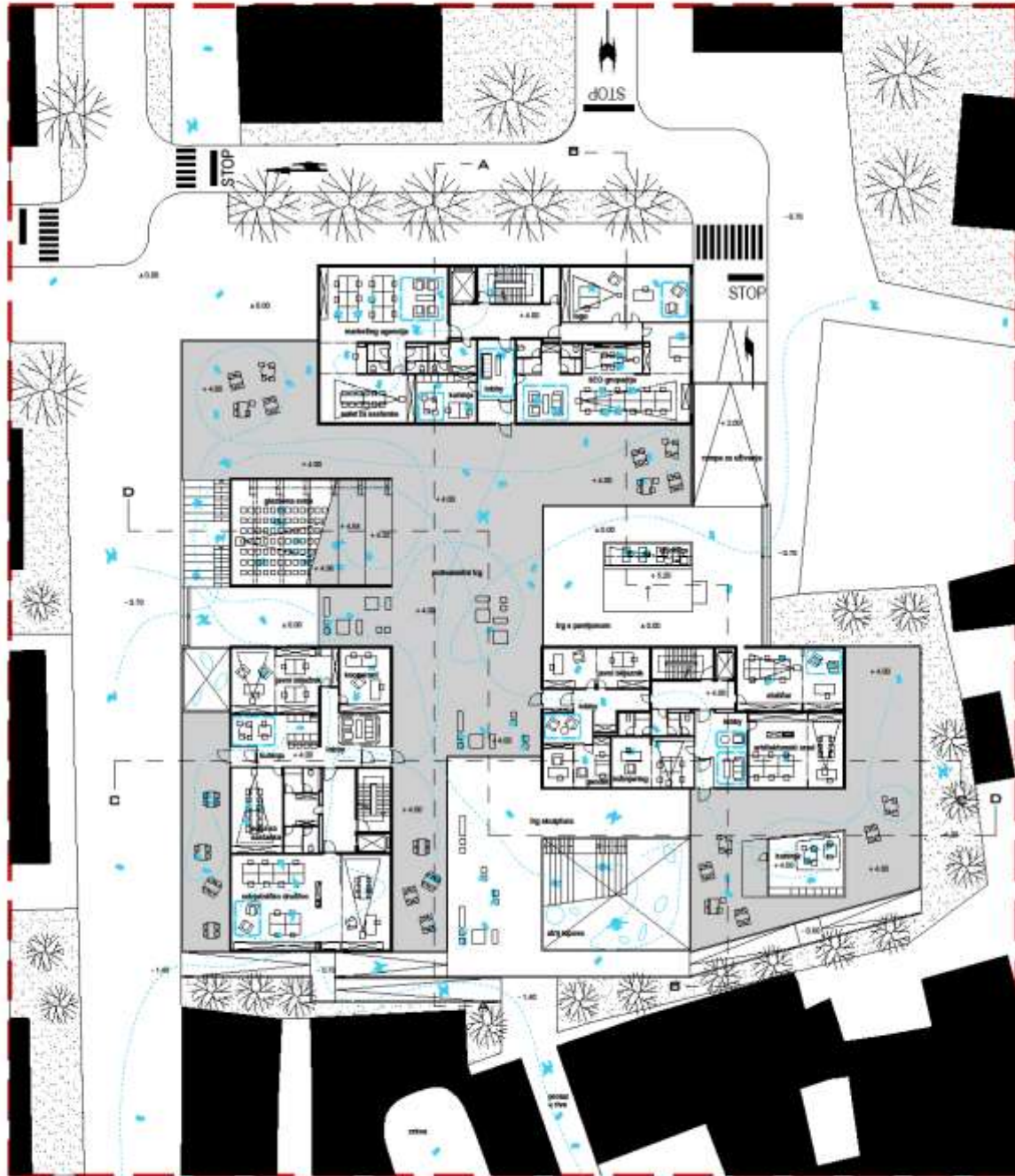
PVN TRG



POSLOVNI CENTAR



CENTAR URBANE KULTURE





OVOJNICA



VANJSKI PROSTORI

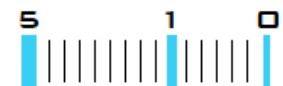
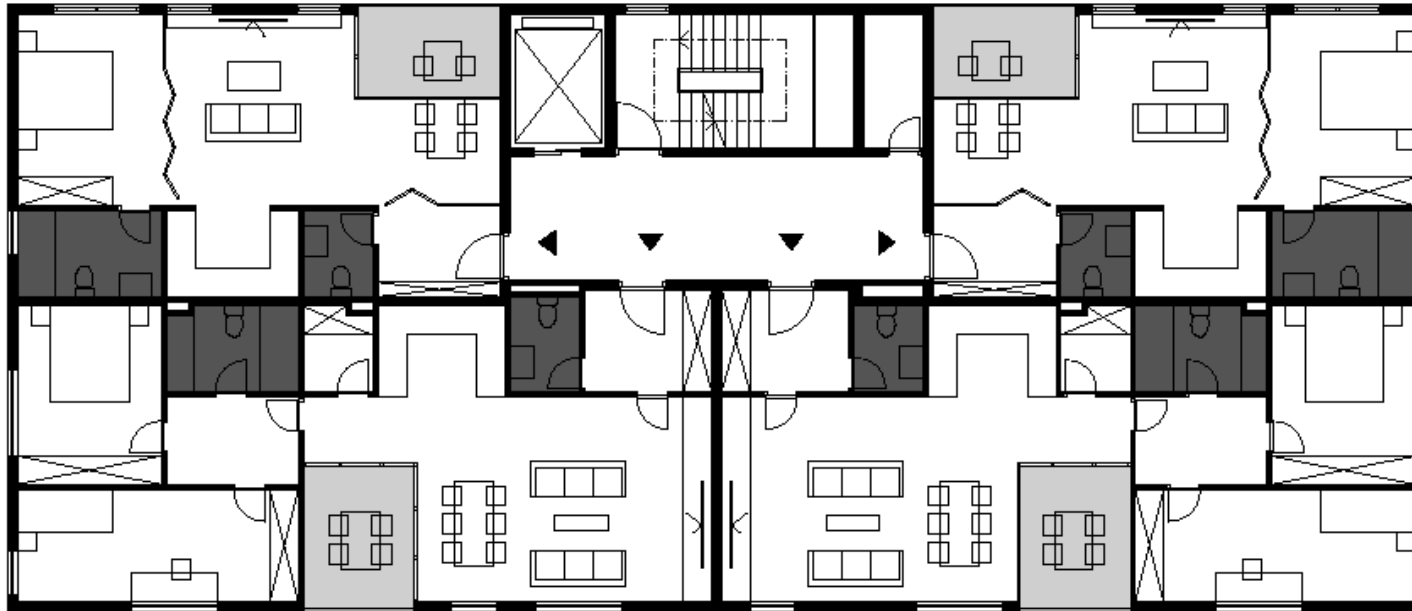
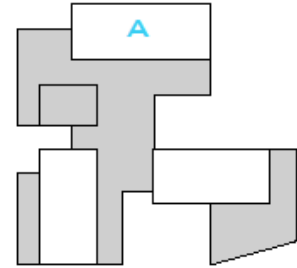
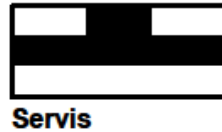


SERVISNA ZONA



STANOVI

Zgrada A



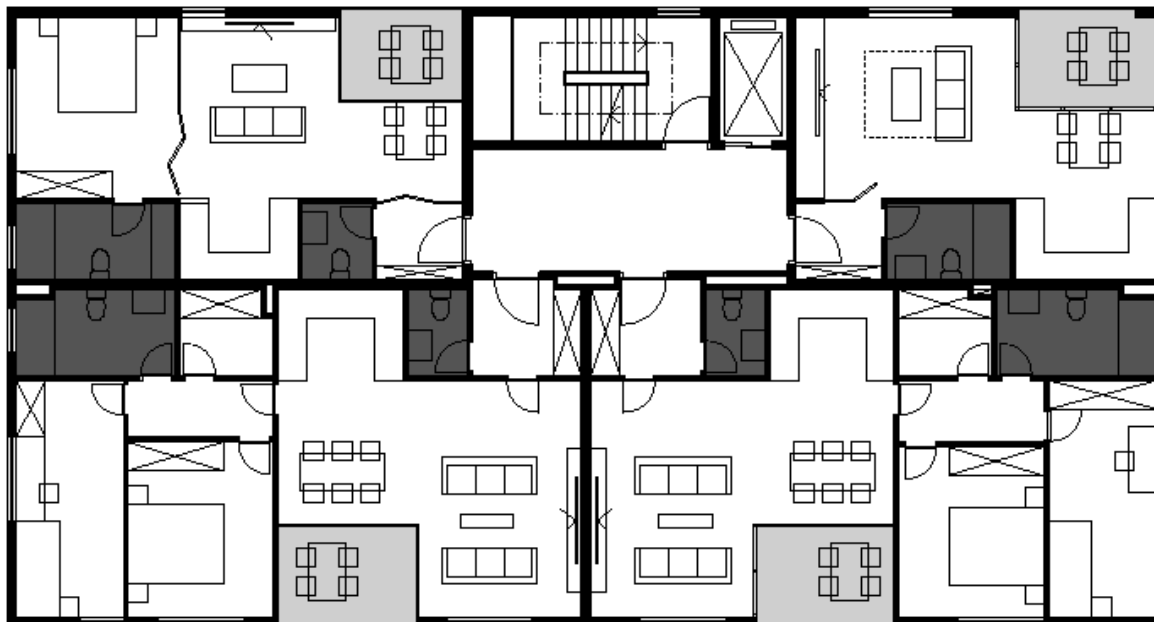
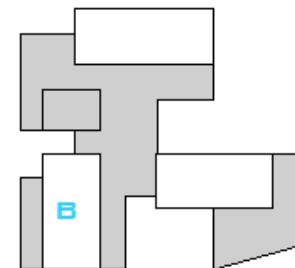
Zgrada B



Servis



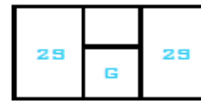
Stanovi



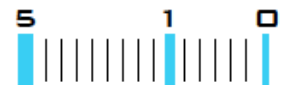
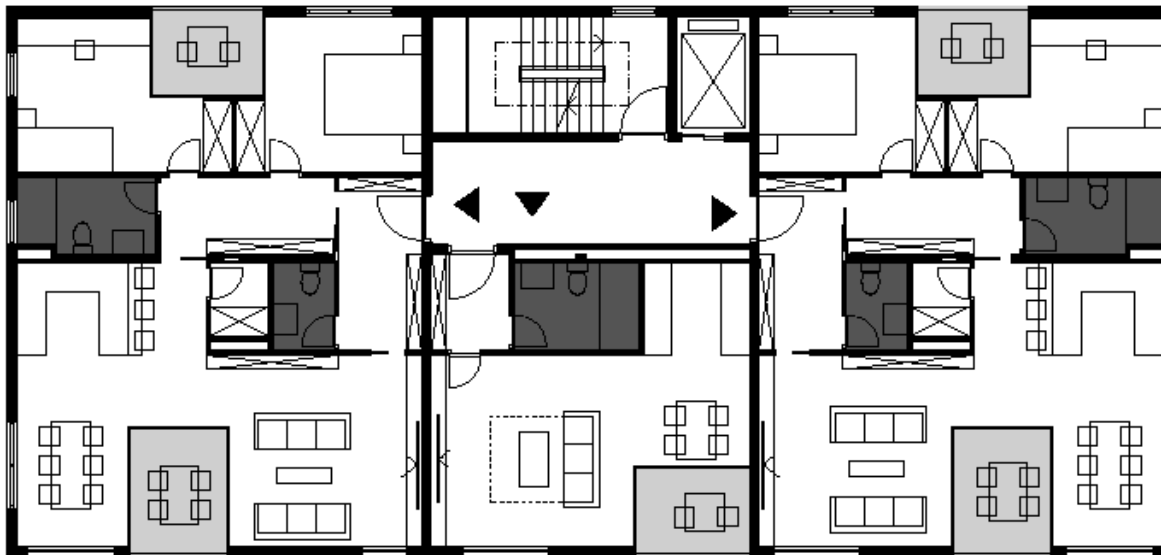
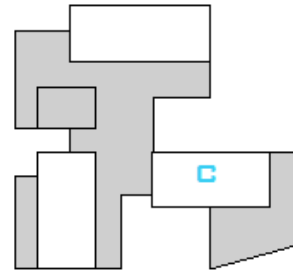
Zgrada C

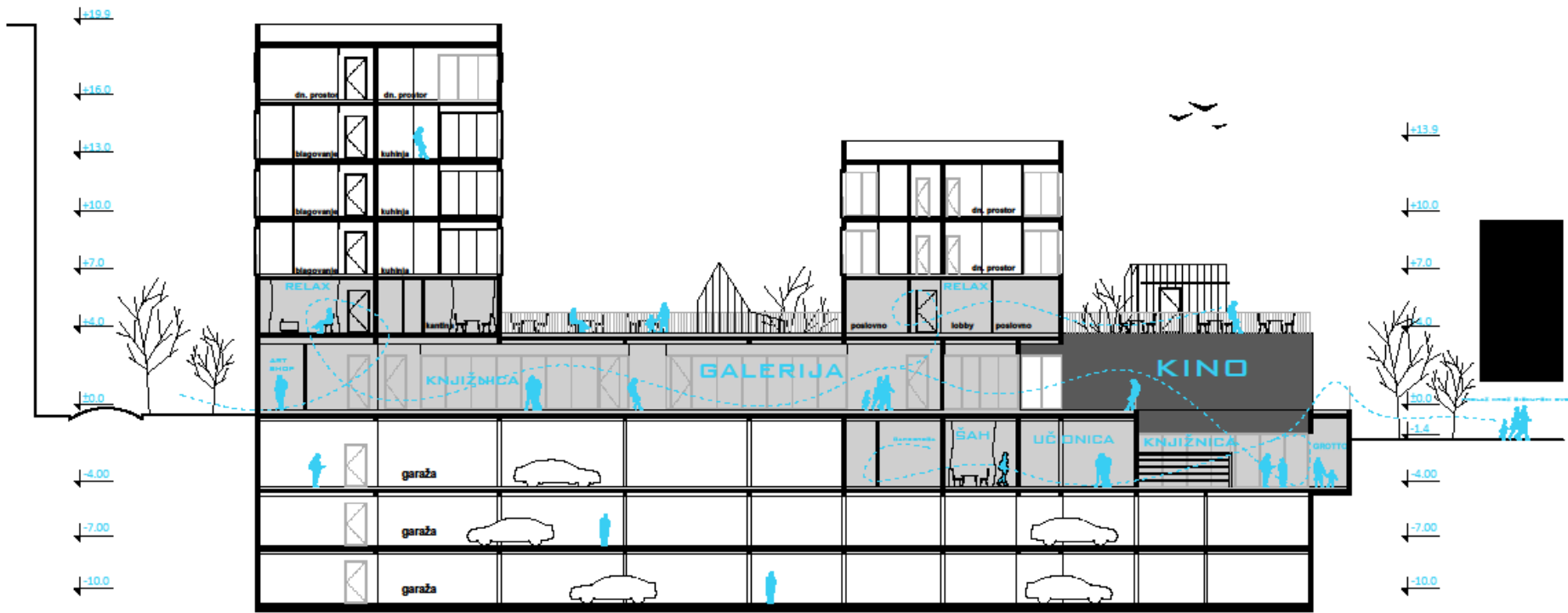
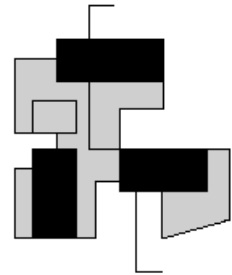


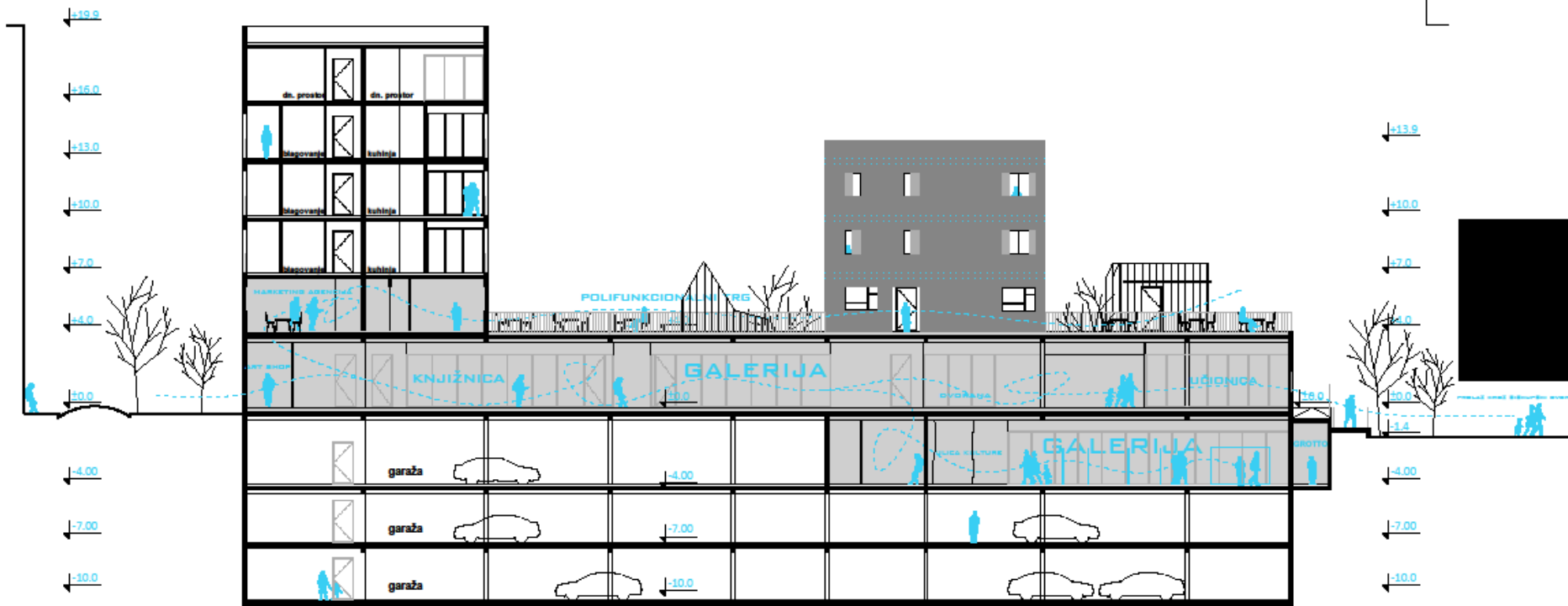
Servis

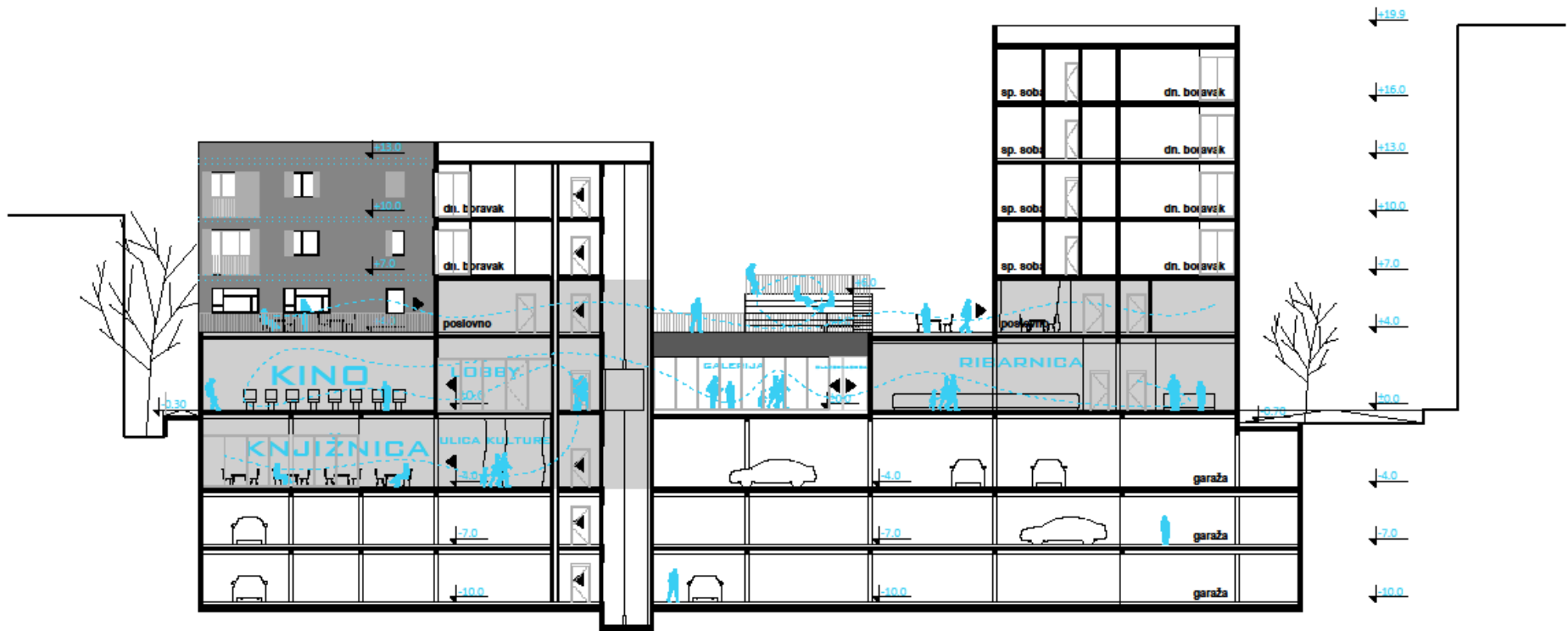
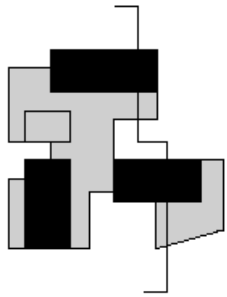


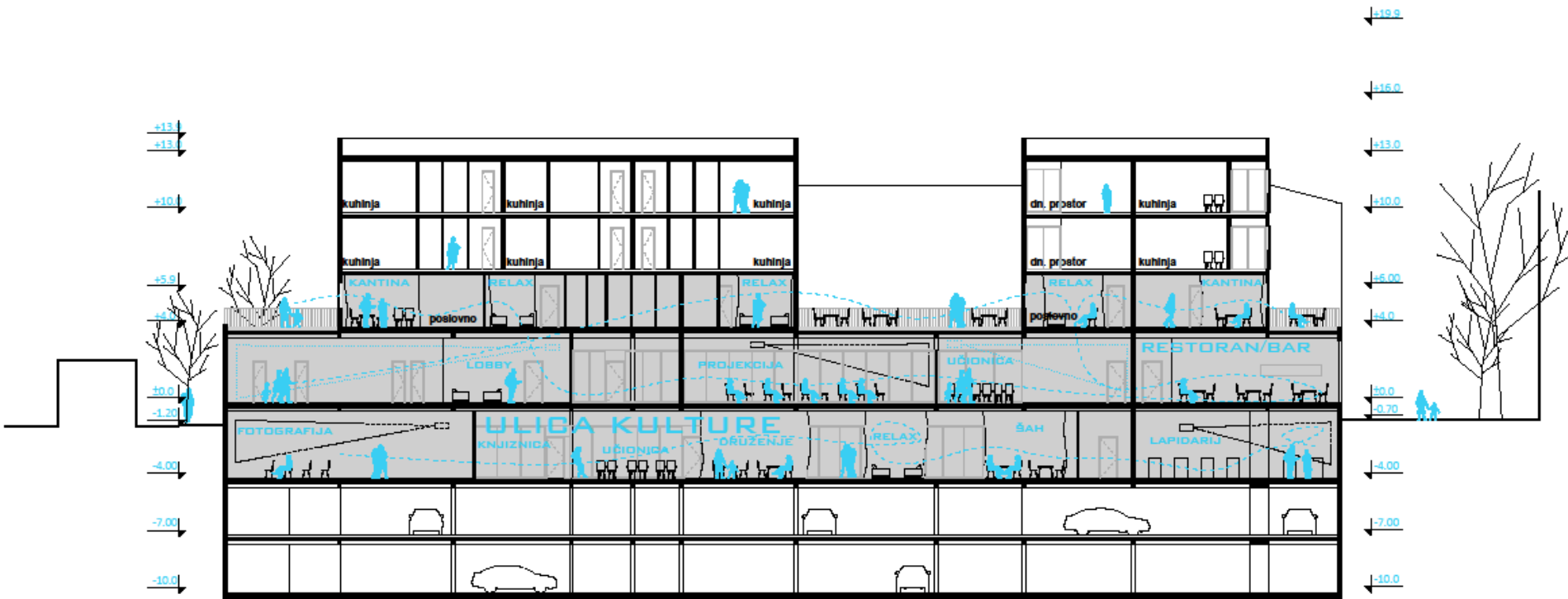
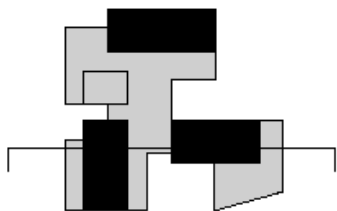
Stanovi

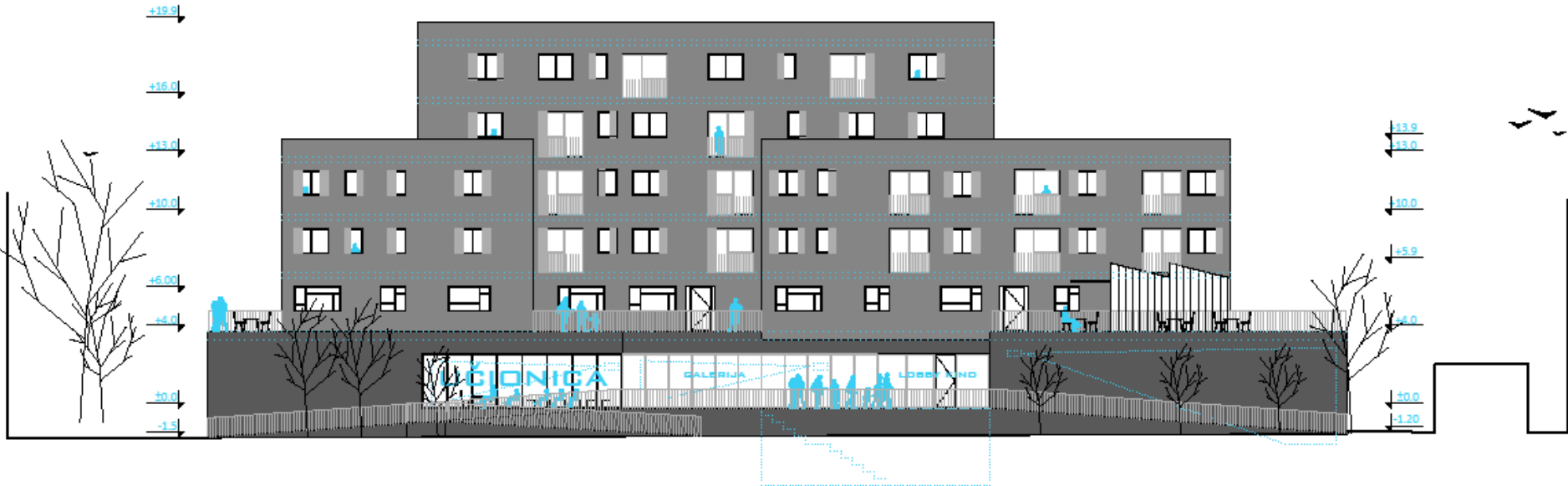
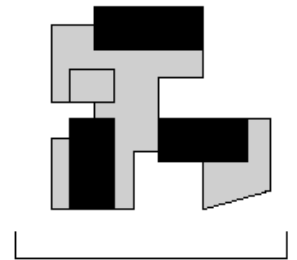


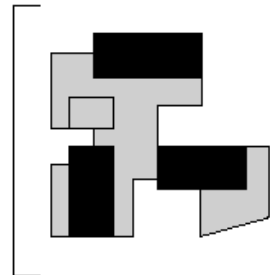


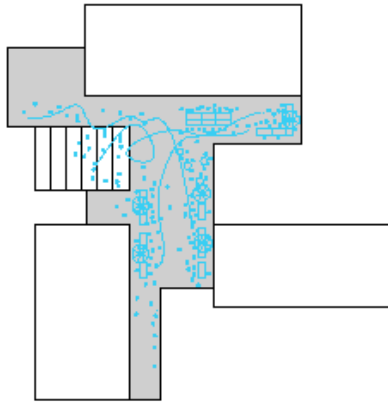




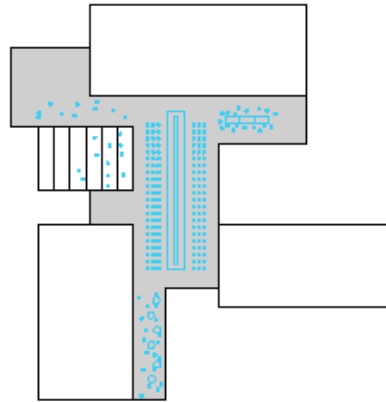




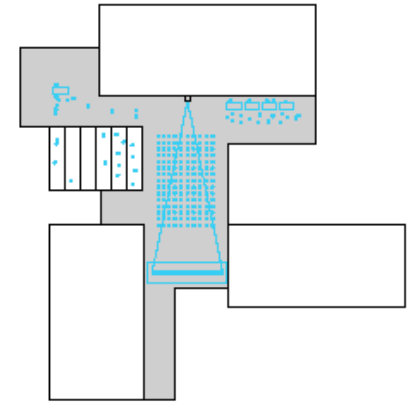




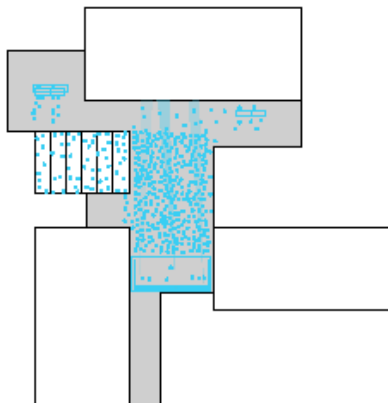
Gastro sajam



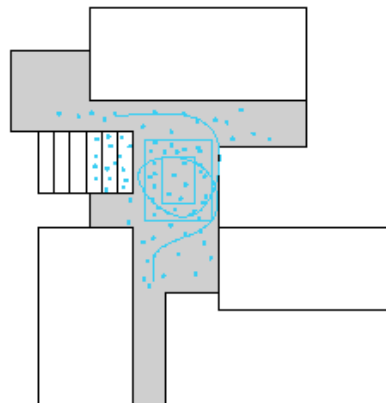
Modna revija



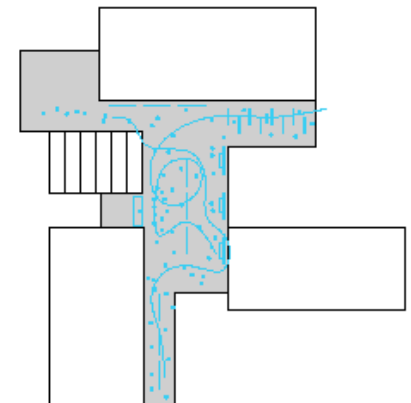
Kino na otvorenom



Dječji koncert

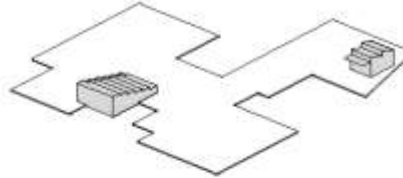
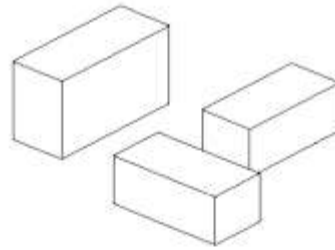


Tribina



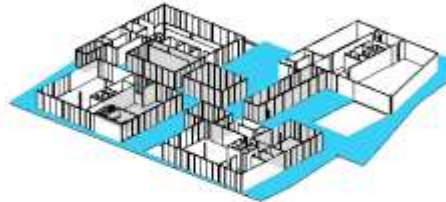
Izložba makarskih umjetnika

STANOVANJE



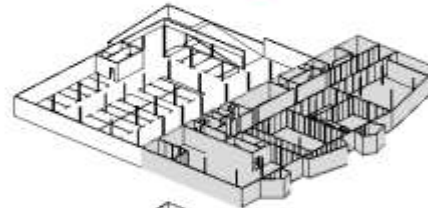
PVN TRG I TRIBINE

PROHDNO PRIZEMLJE



KULTURA

GARAŽA



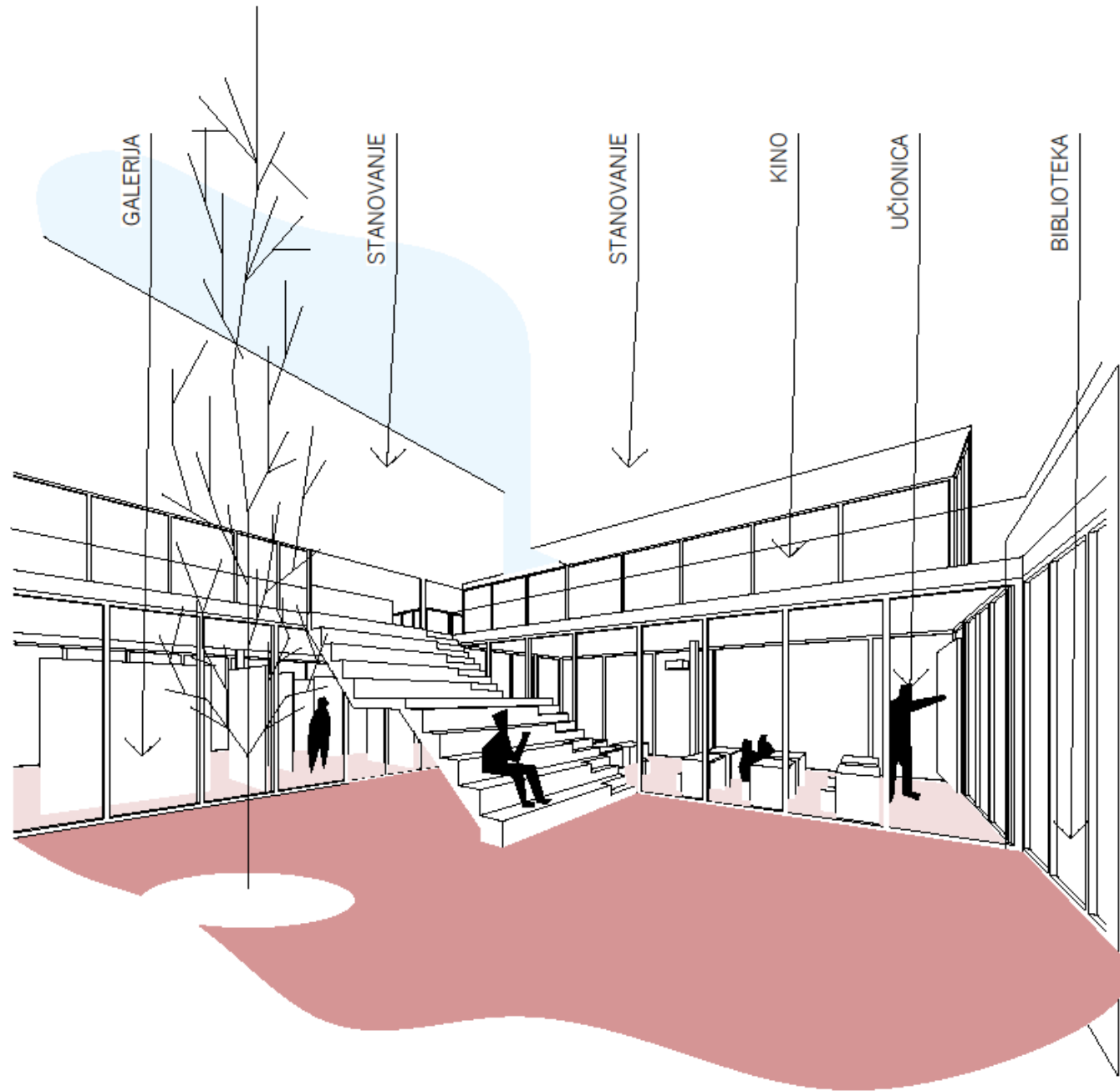
KULTURA

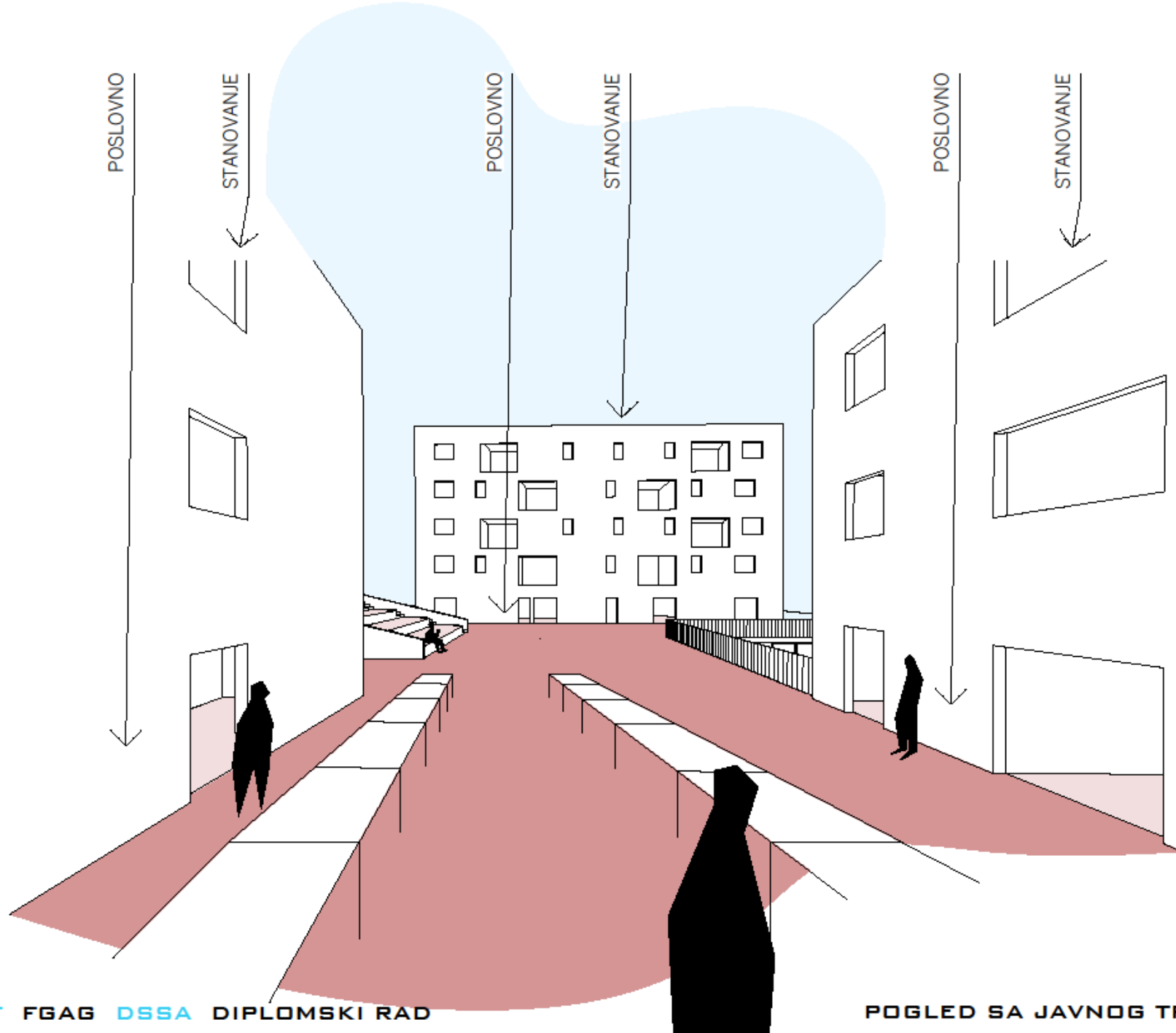
GARAŽA



GARAŽA









maketa etaže -1 kultura i garaža



maketa prizemlja



pomične staklene kubikule



atrij

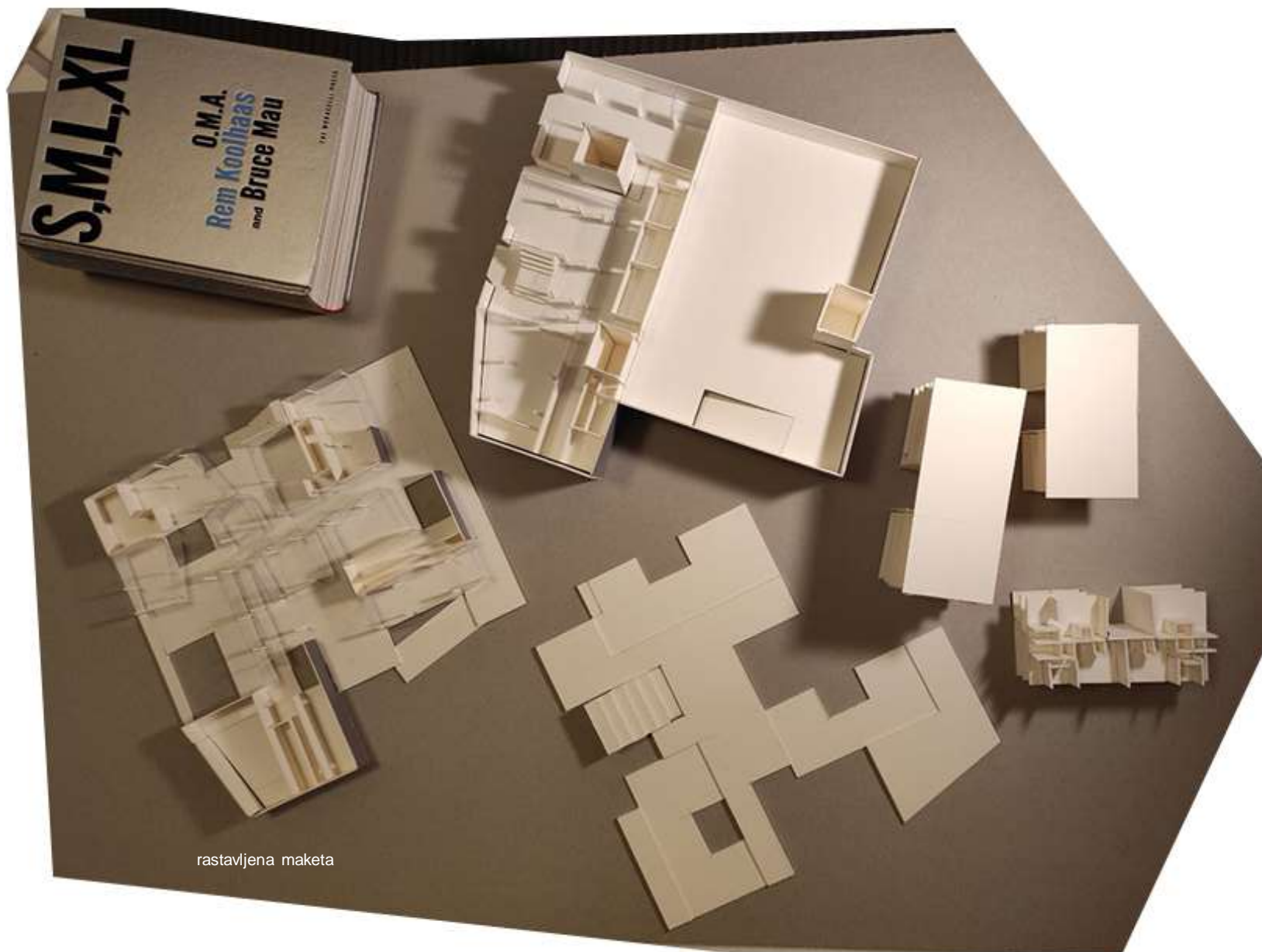


1. kat, poslovni centar





karakteristični stanovi



rastavljena maketa