

# SISTEMA DIRETO X SISTEMA TRONCO-ALIMENTADOR



OBSERVATÓRIO  
DA MOBILIDADE URBANA  
**UFSC**



**UNIVERSIDADE FEDERAL  
DE SANTA CATARINA**

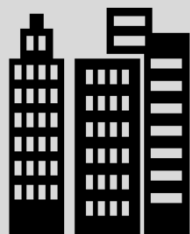
Sistema Direto

Sistema Conectado

Sistema Tronco-Alimentador



Bairro 1



Bairro 2



Bairro 3

Parque



Universidade



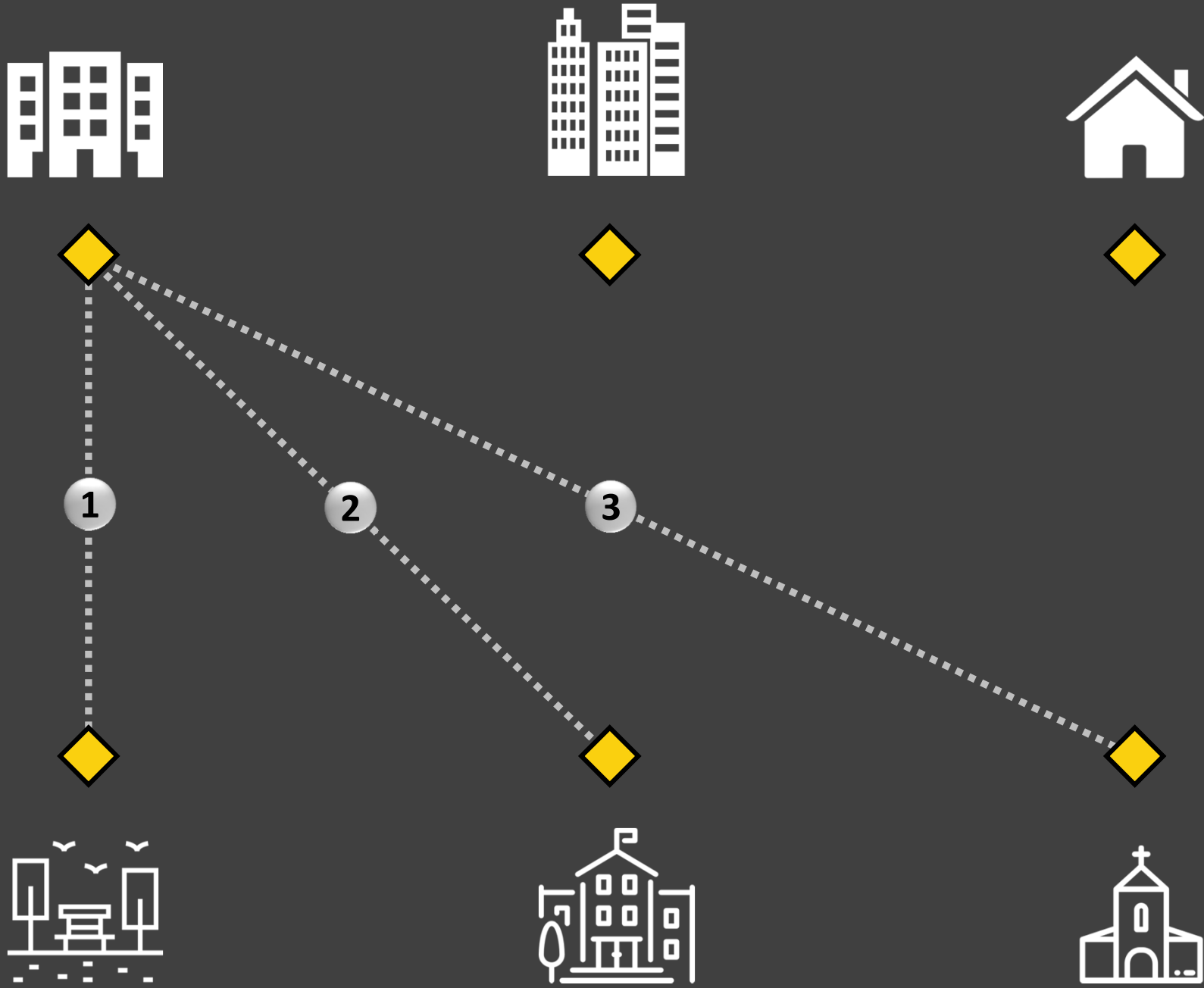
Centro  
Histórico



# SISTEMA DIRETO

- ✓ Conexões diretas entre todos os pontos de interesse
- ✓ Menor trajeto possível entre quaisquer dois pontos



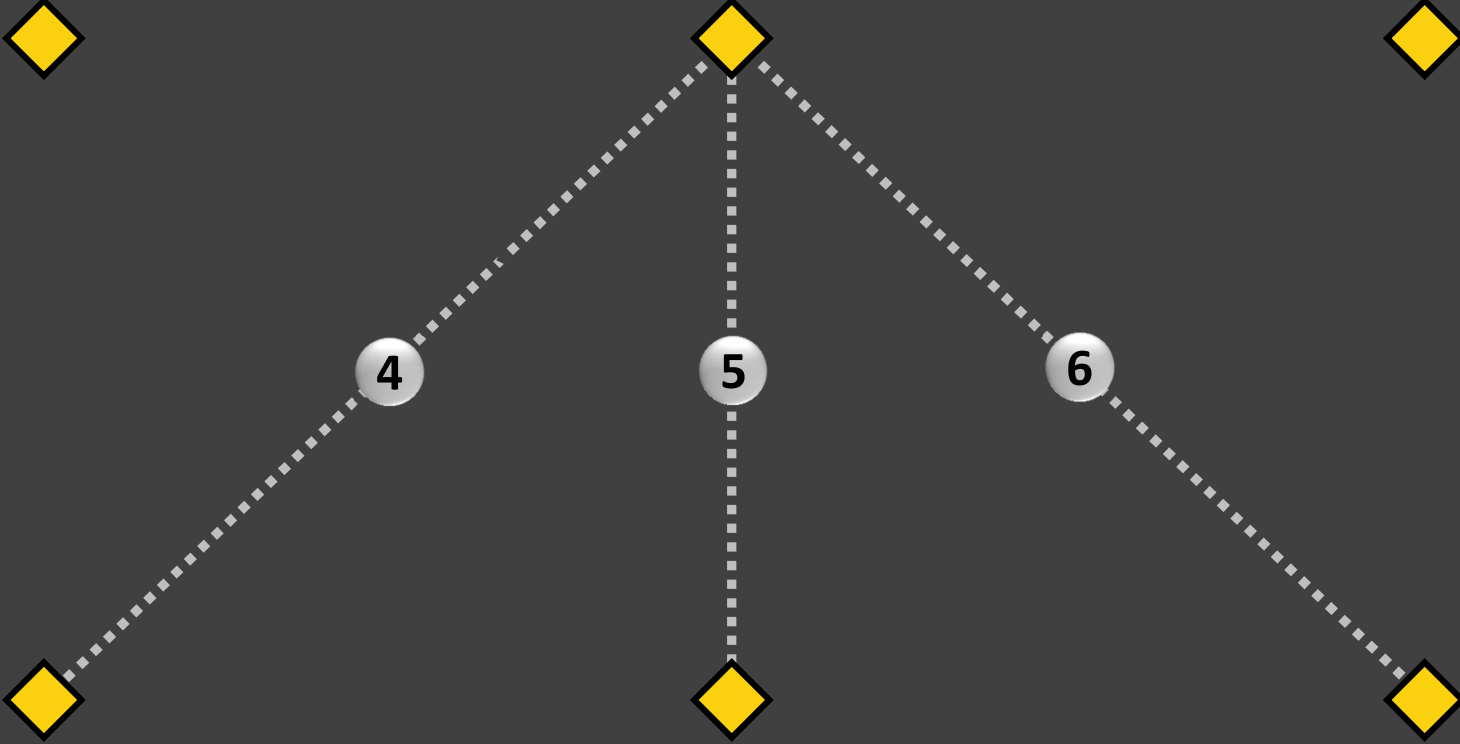




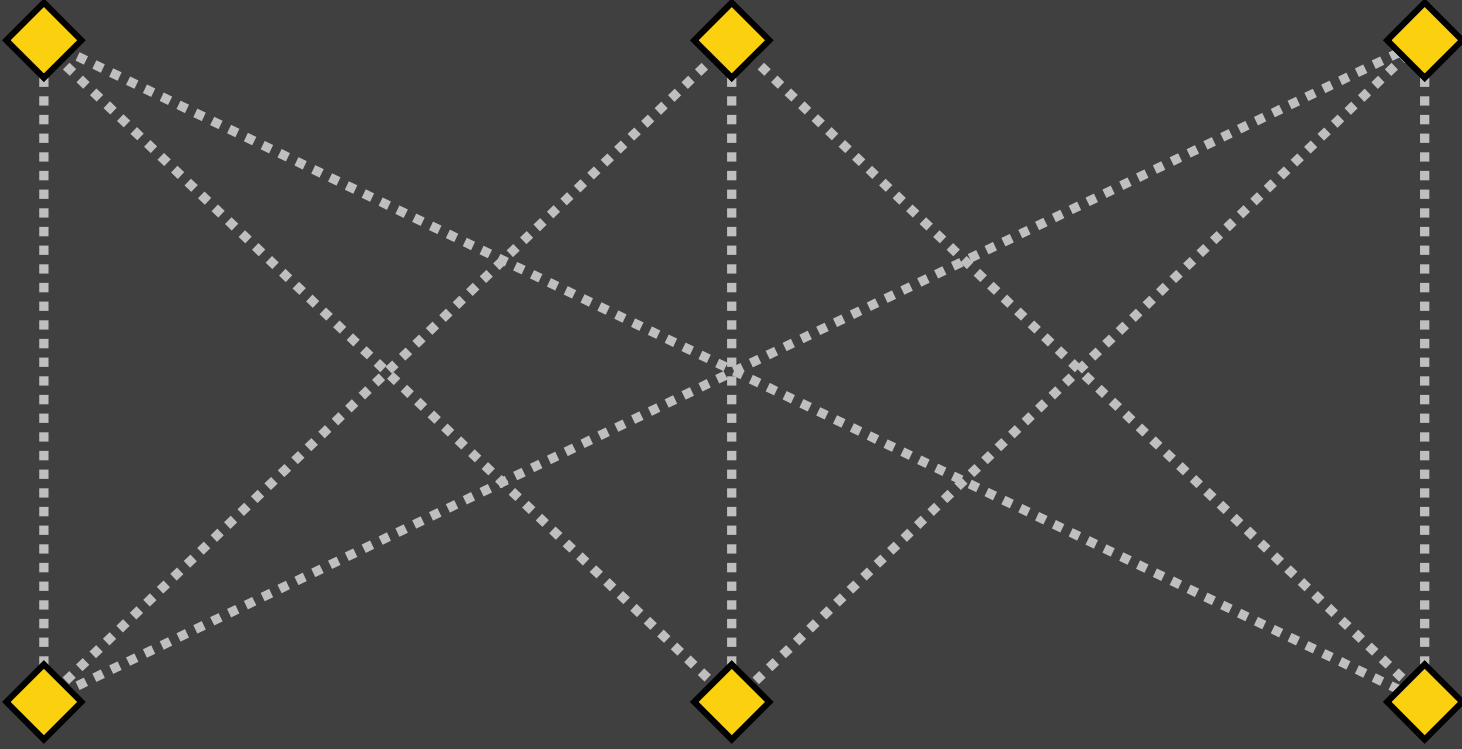
4

5

6











# SISTEMA CONECTADO

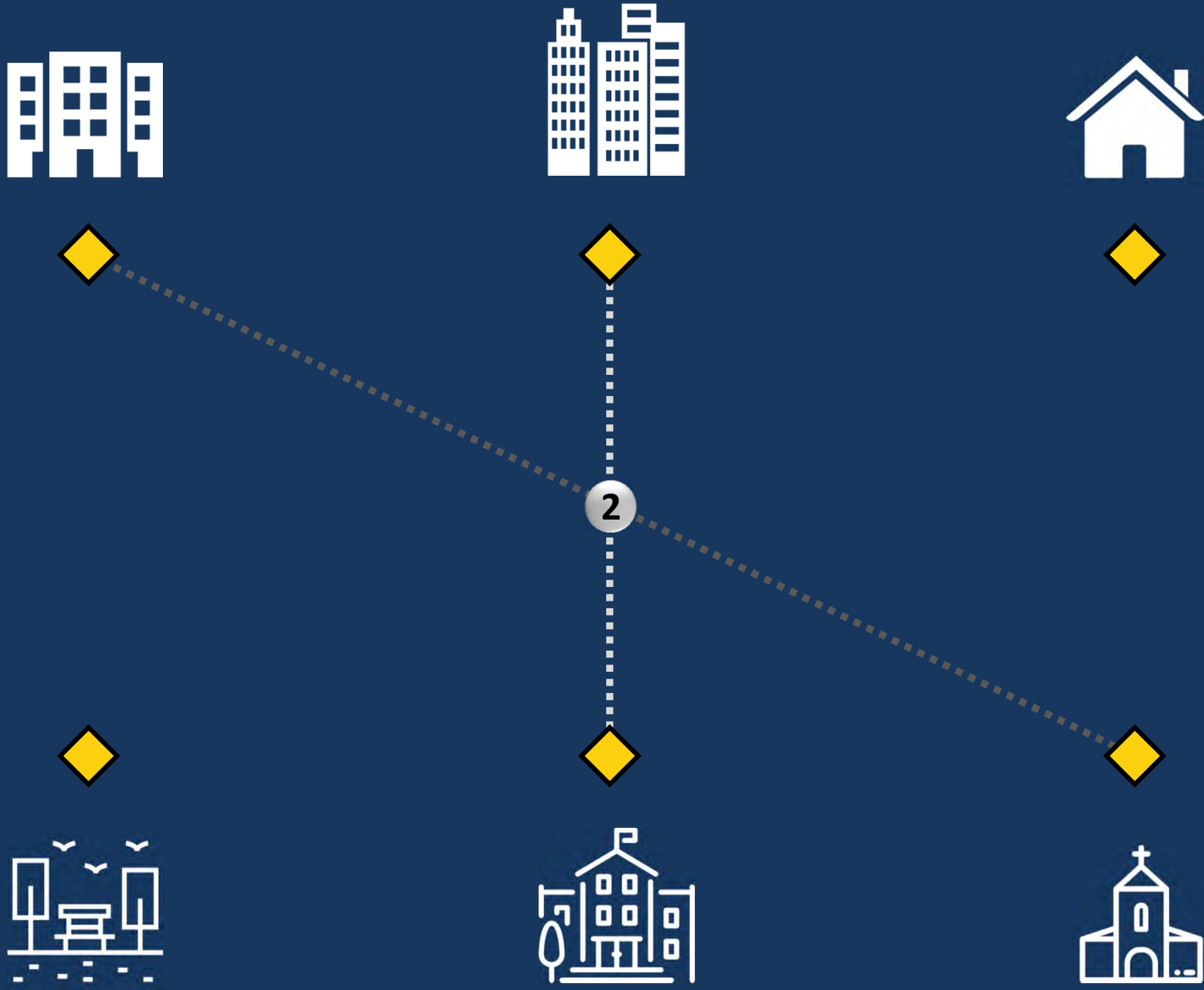
- ✓ Conexões indiretas entre todos os pontos de interesse
- ✓ Trajetos entre pontos de interesse e um ponto de integração

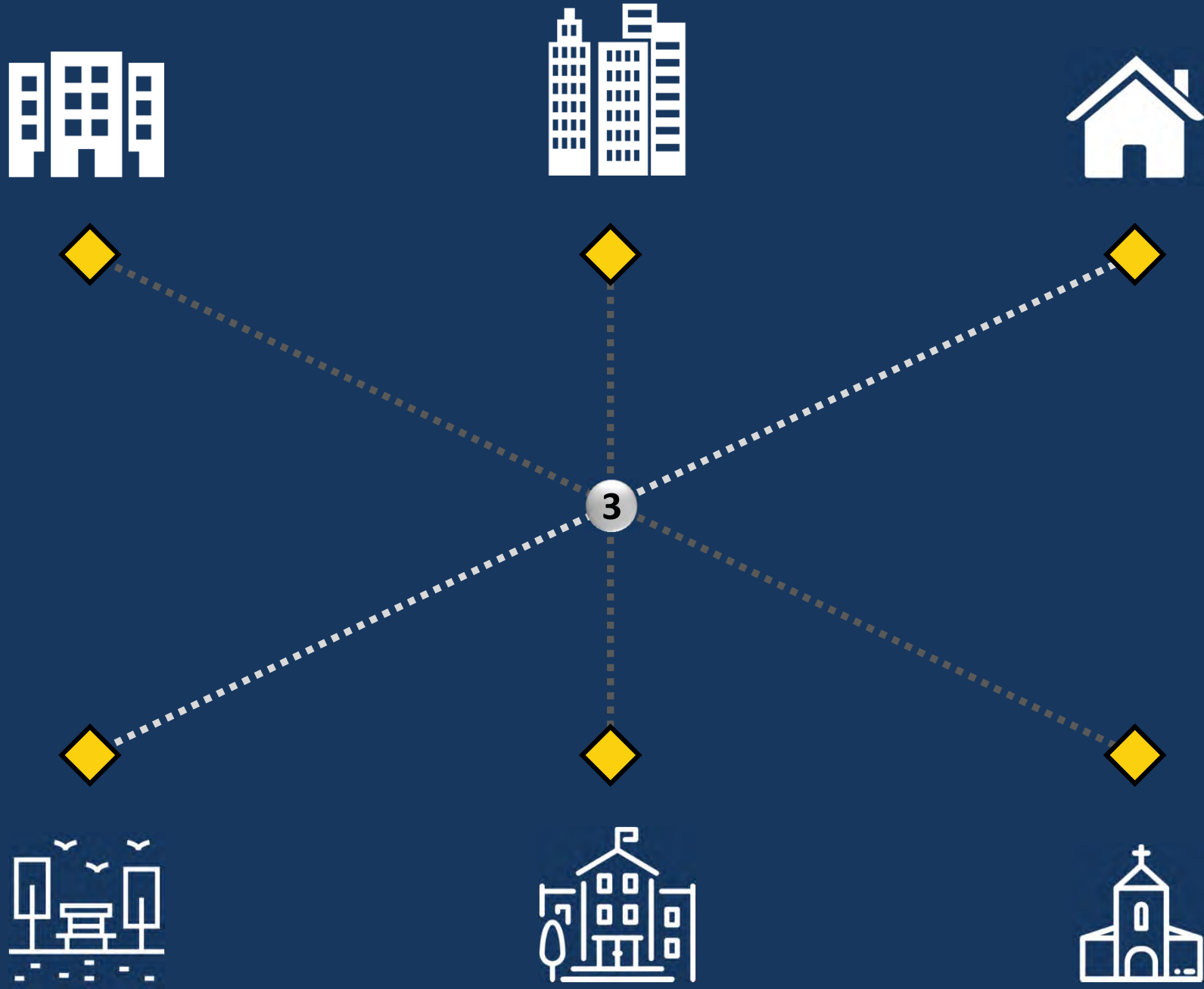


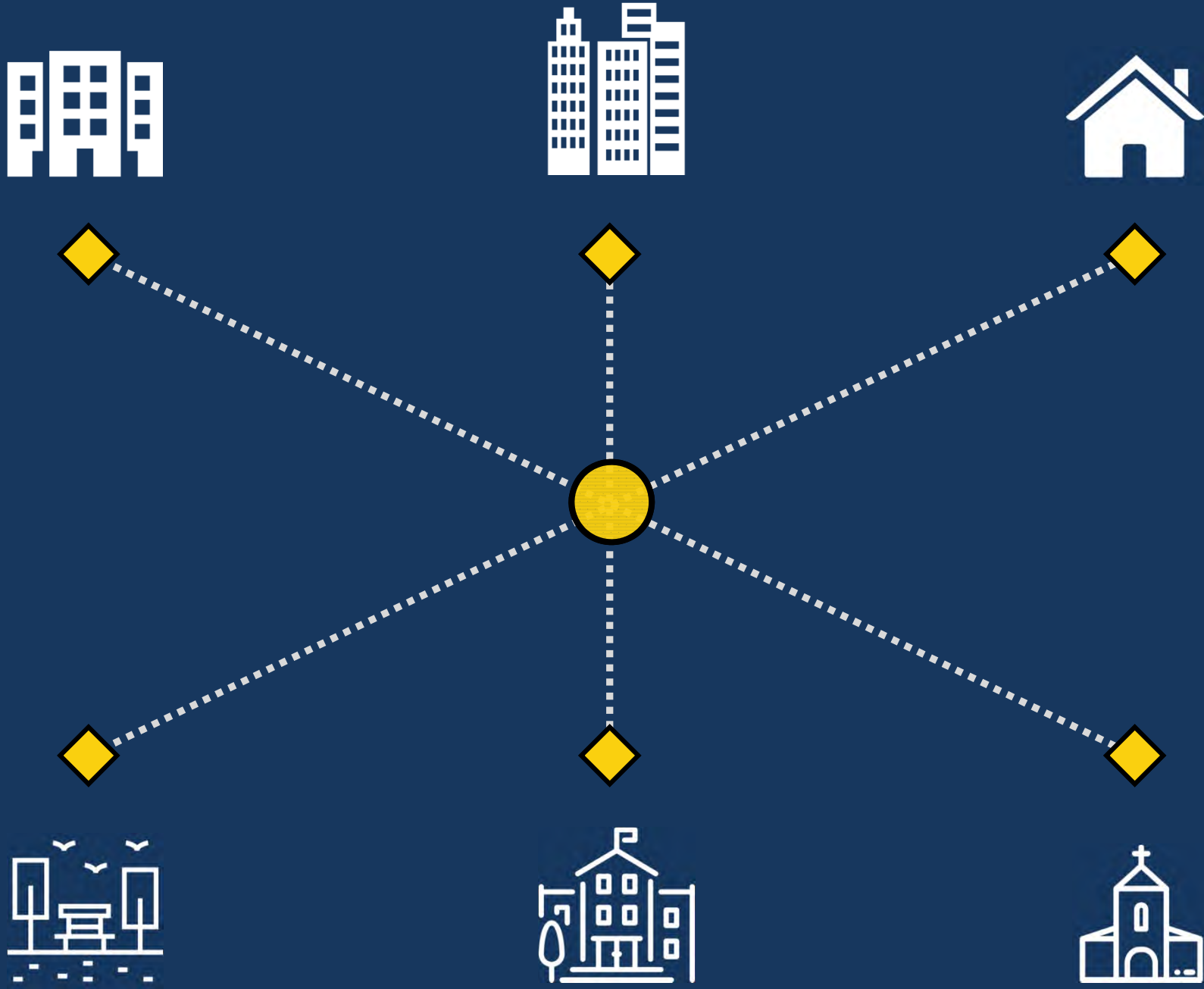


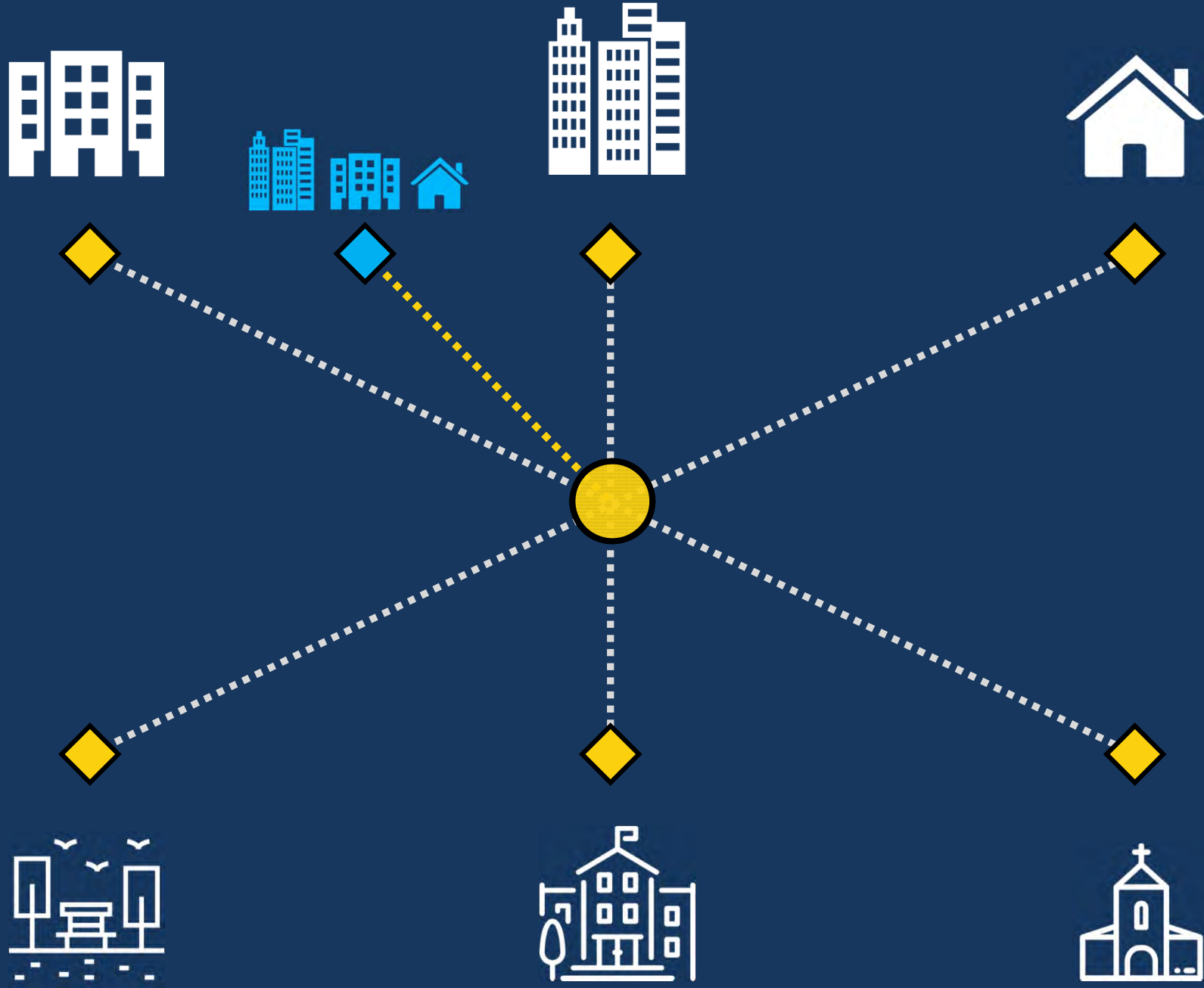
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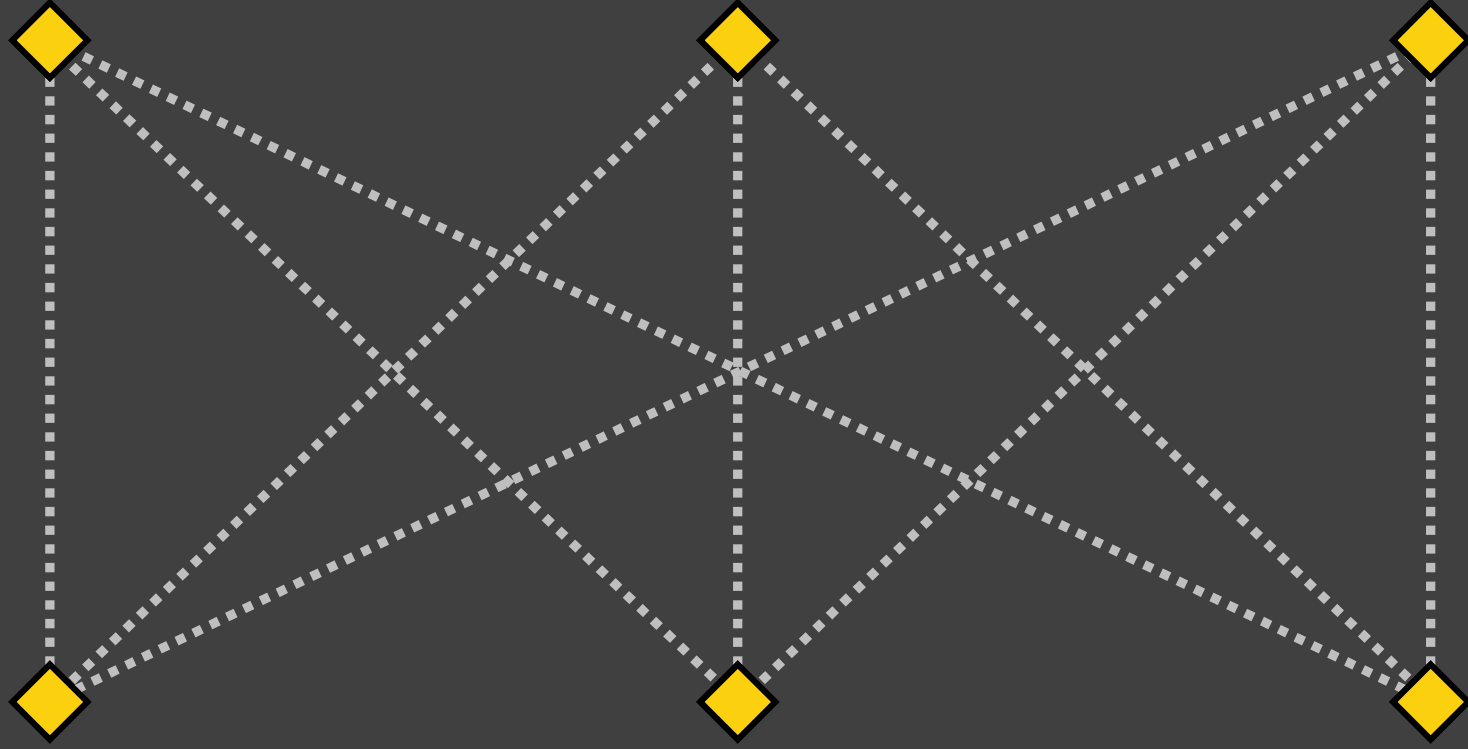


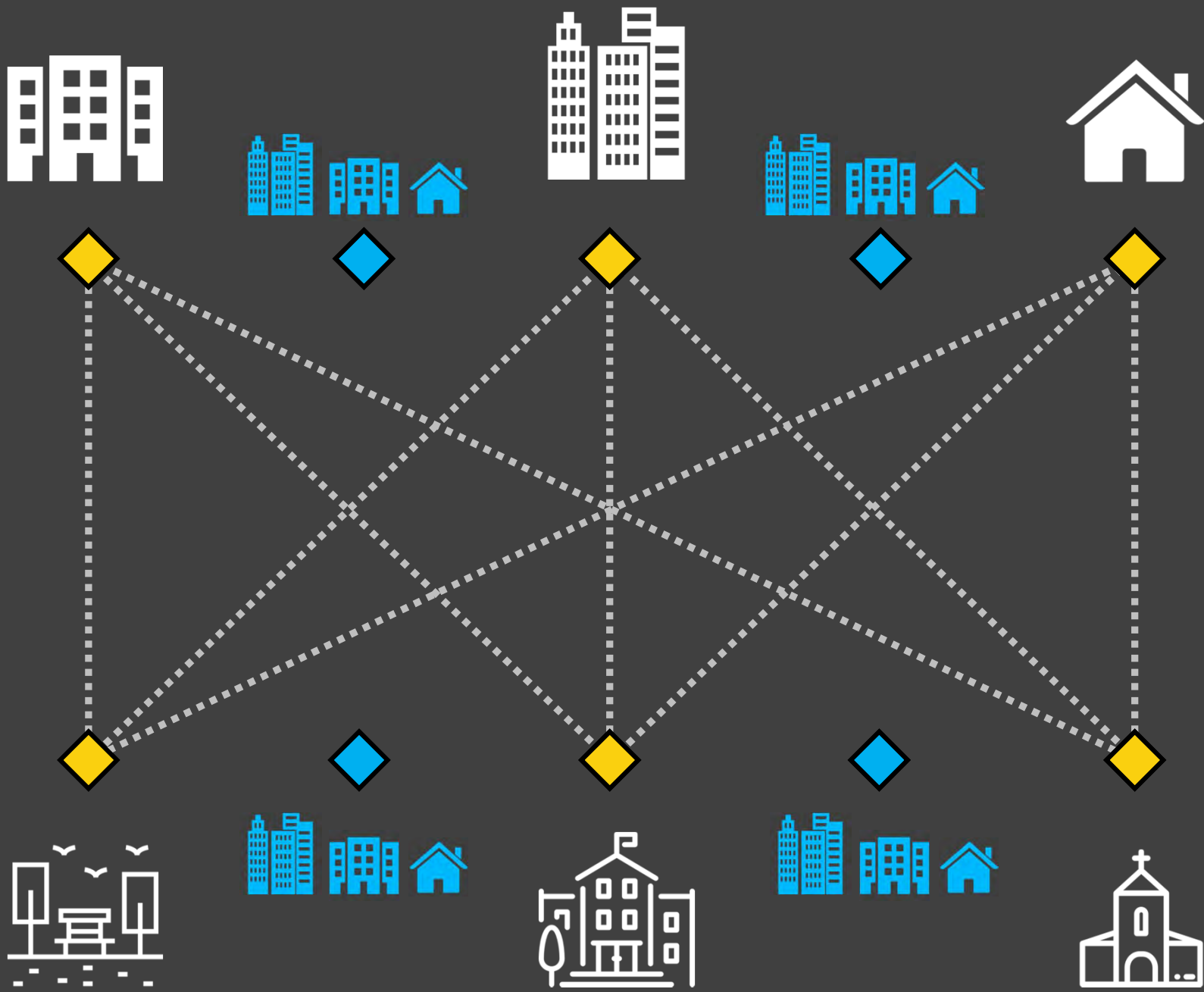
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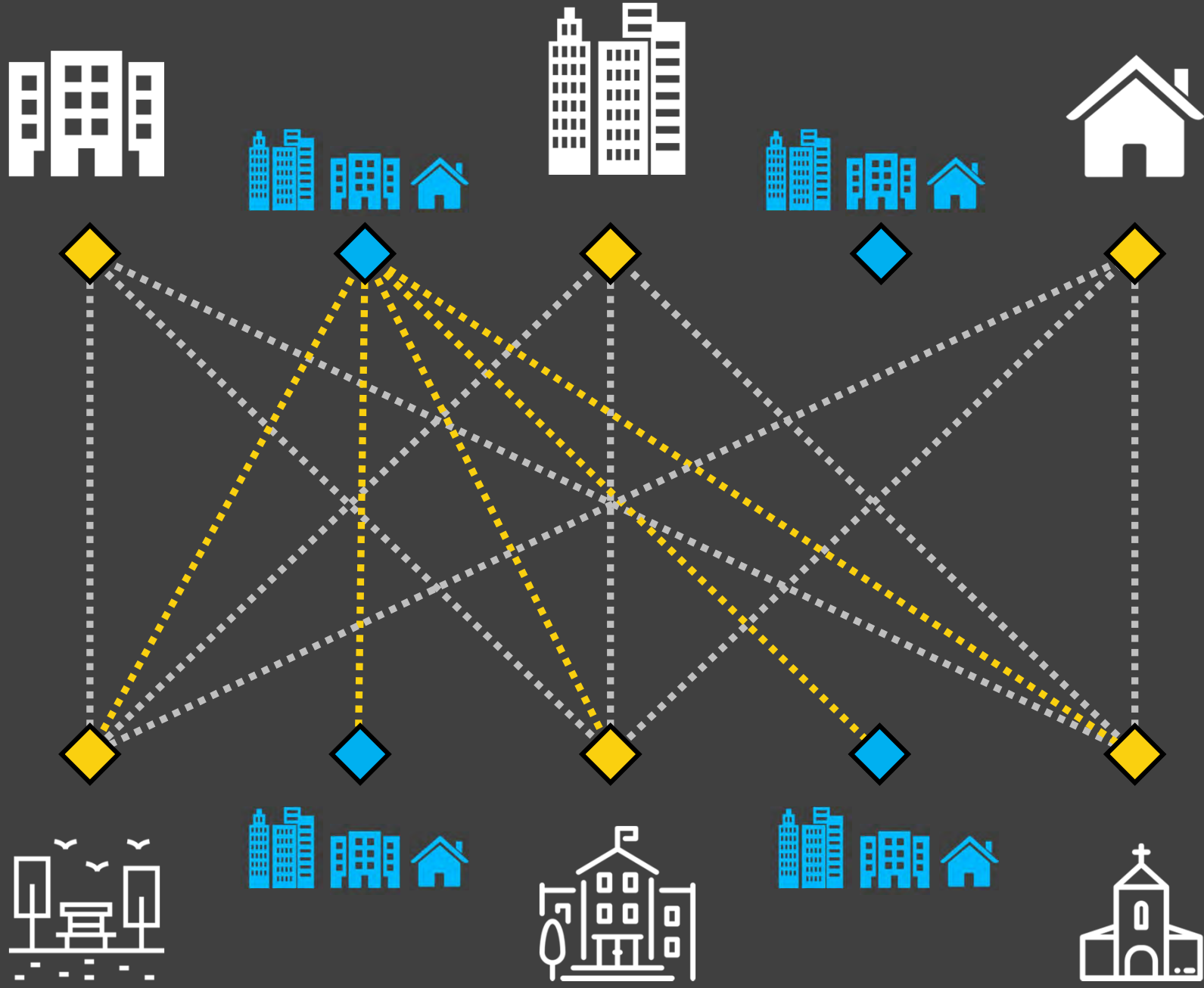
## Expansão do Sistema

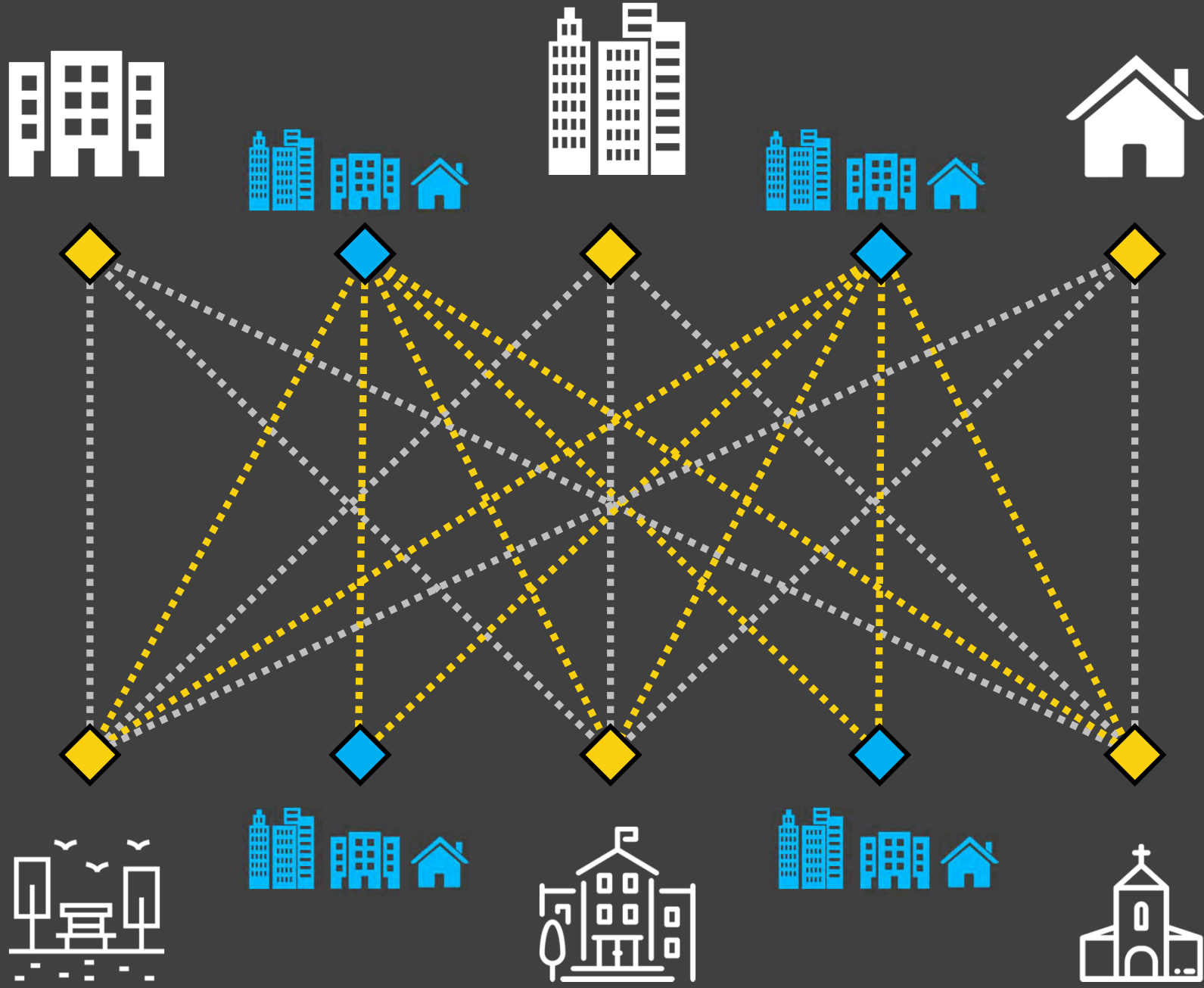


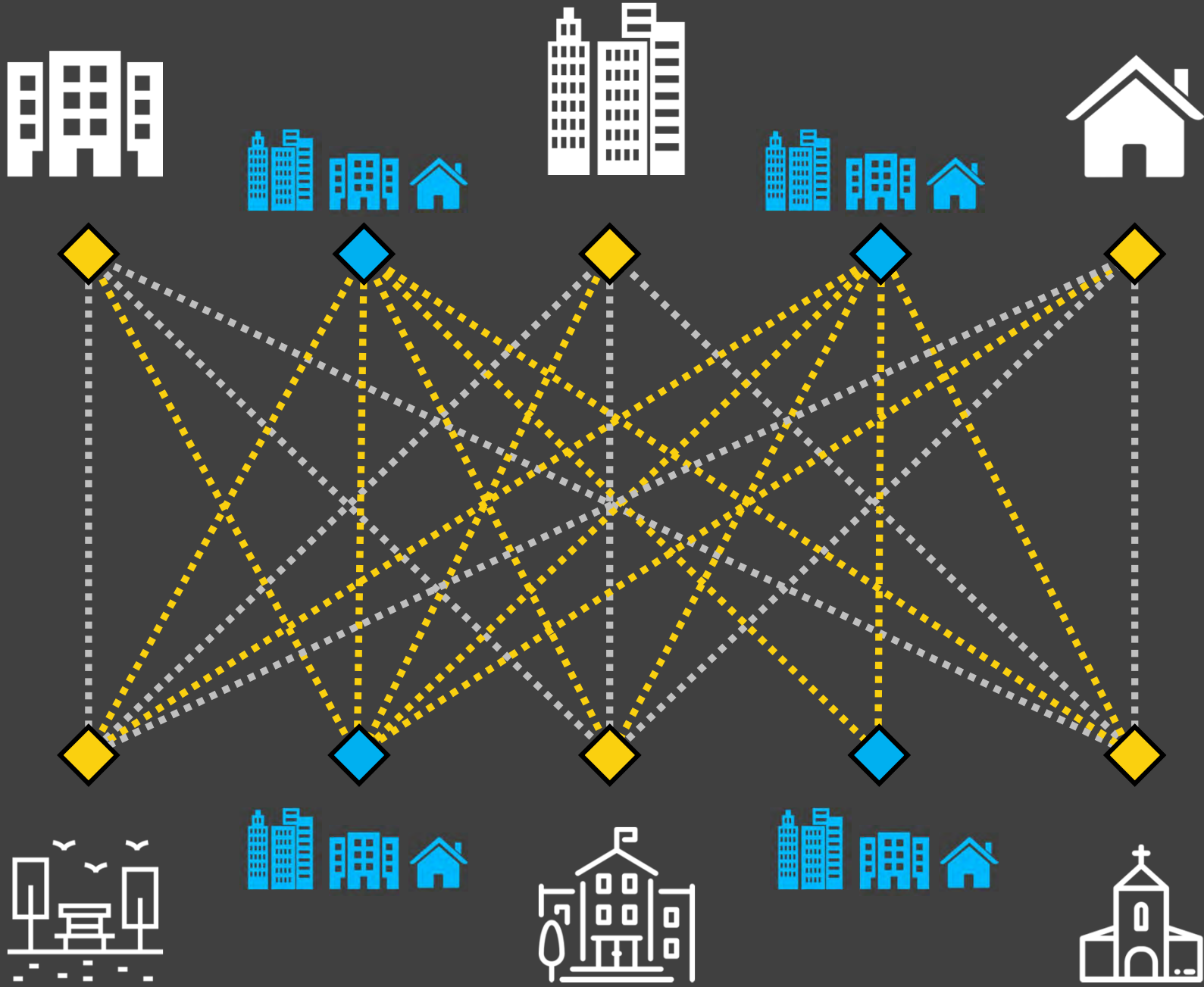


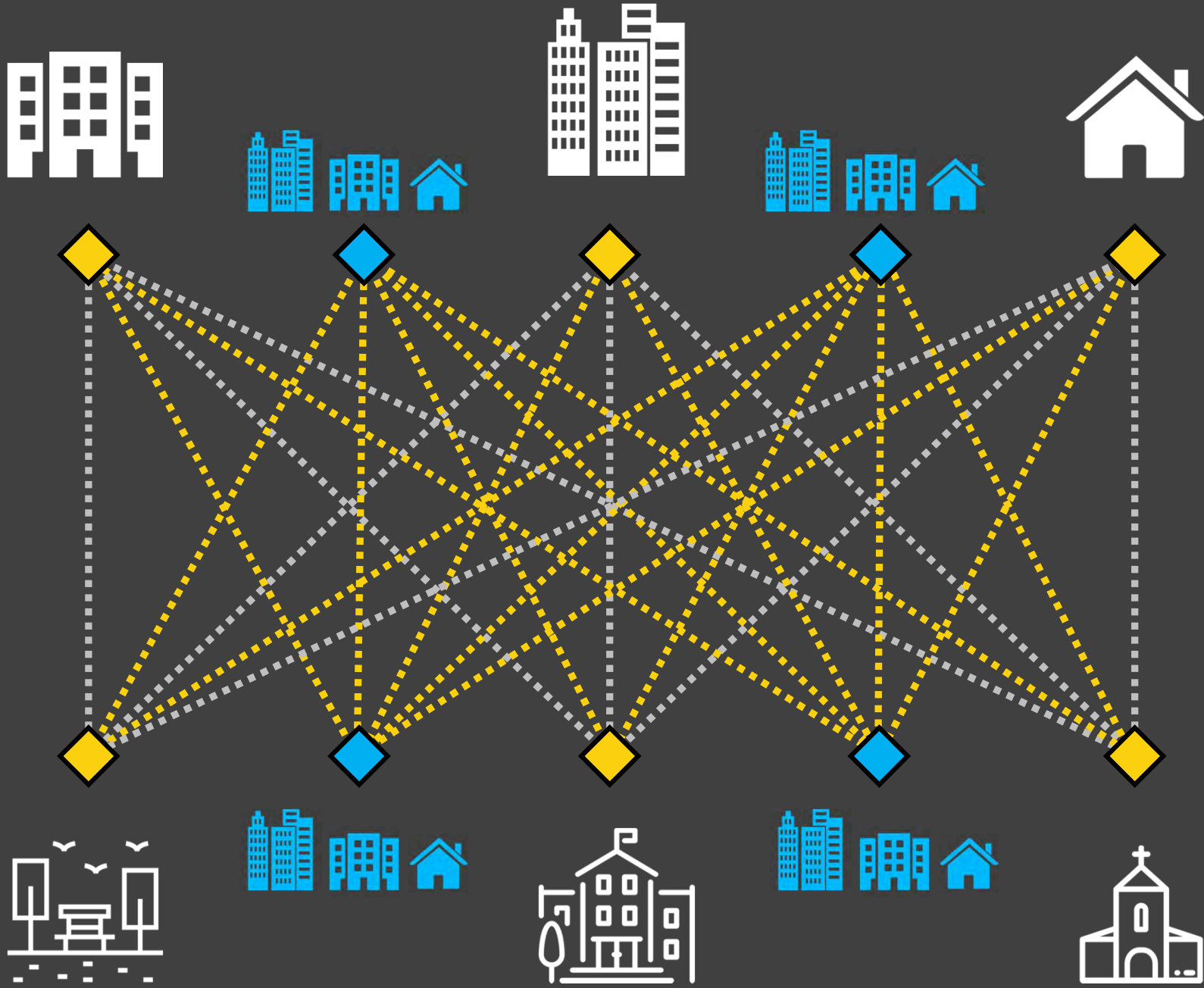


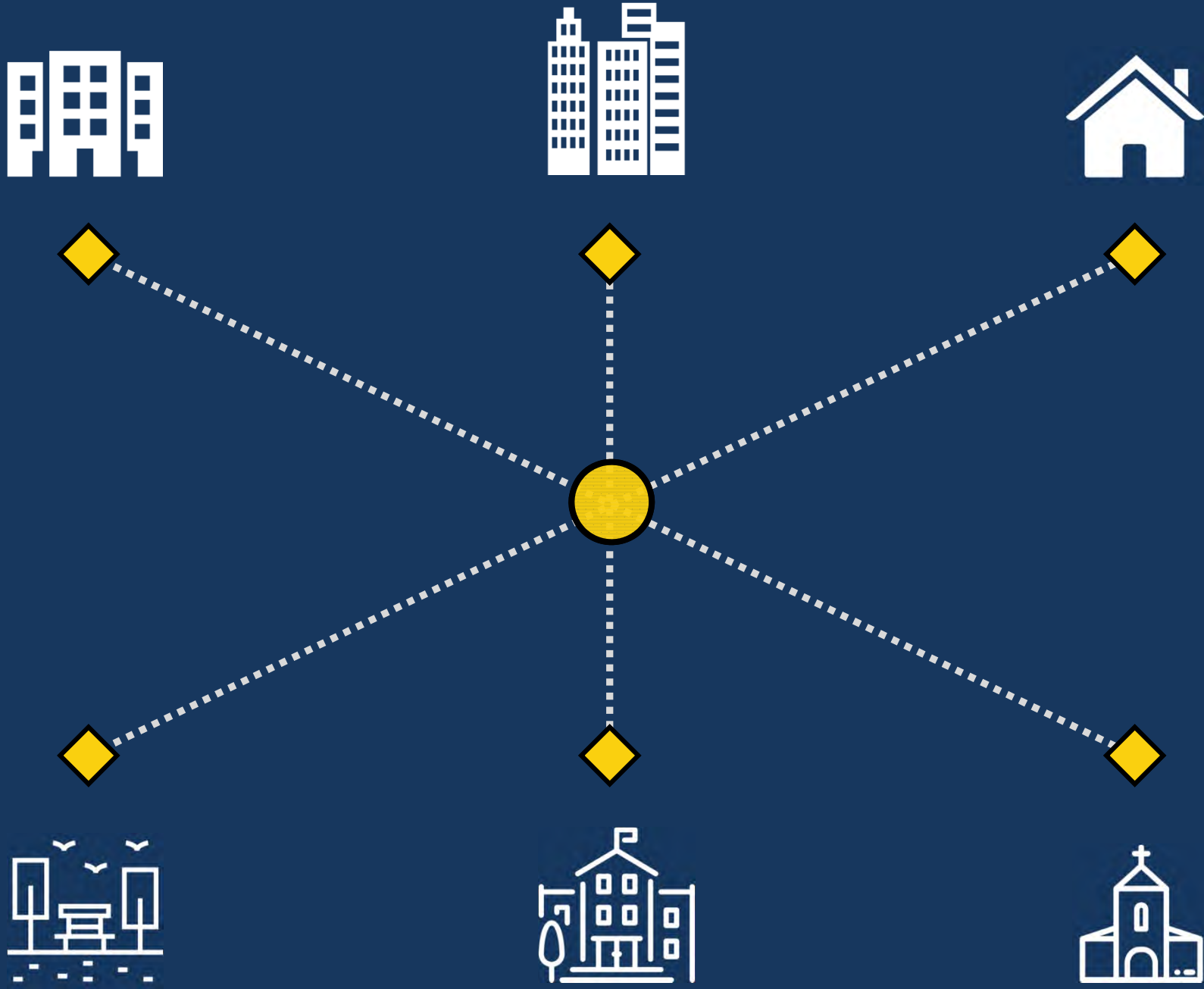






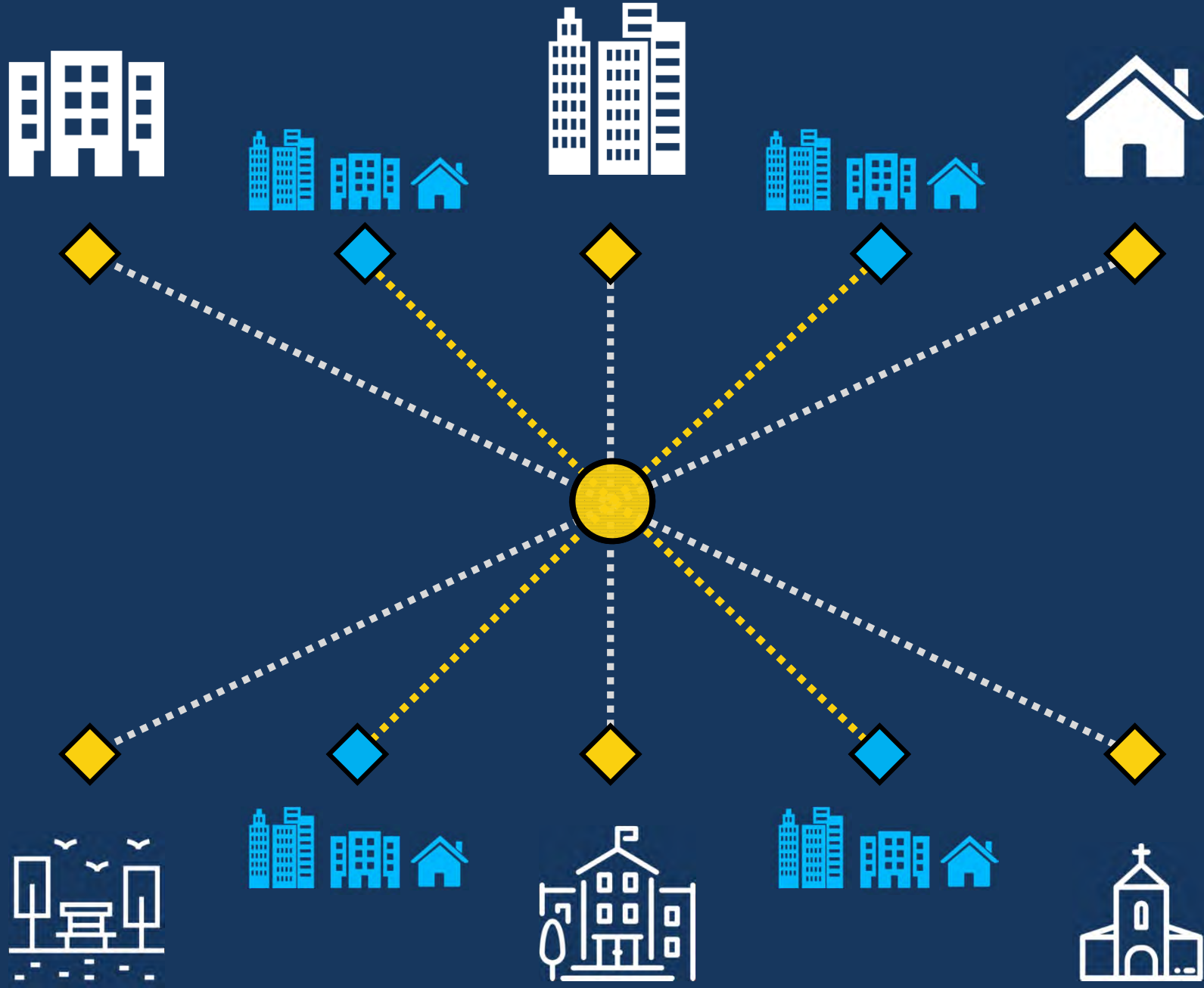








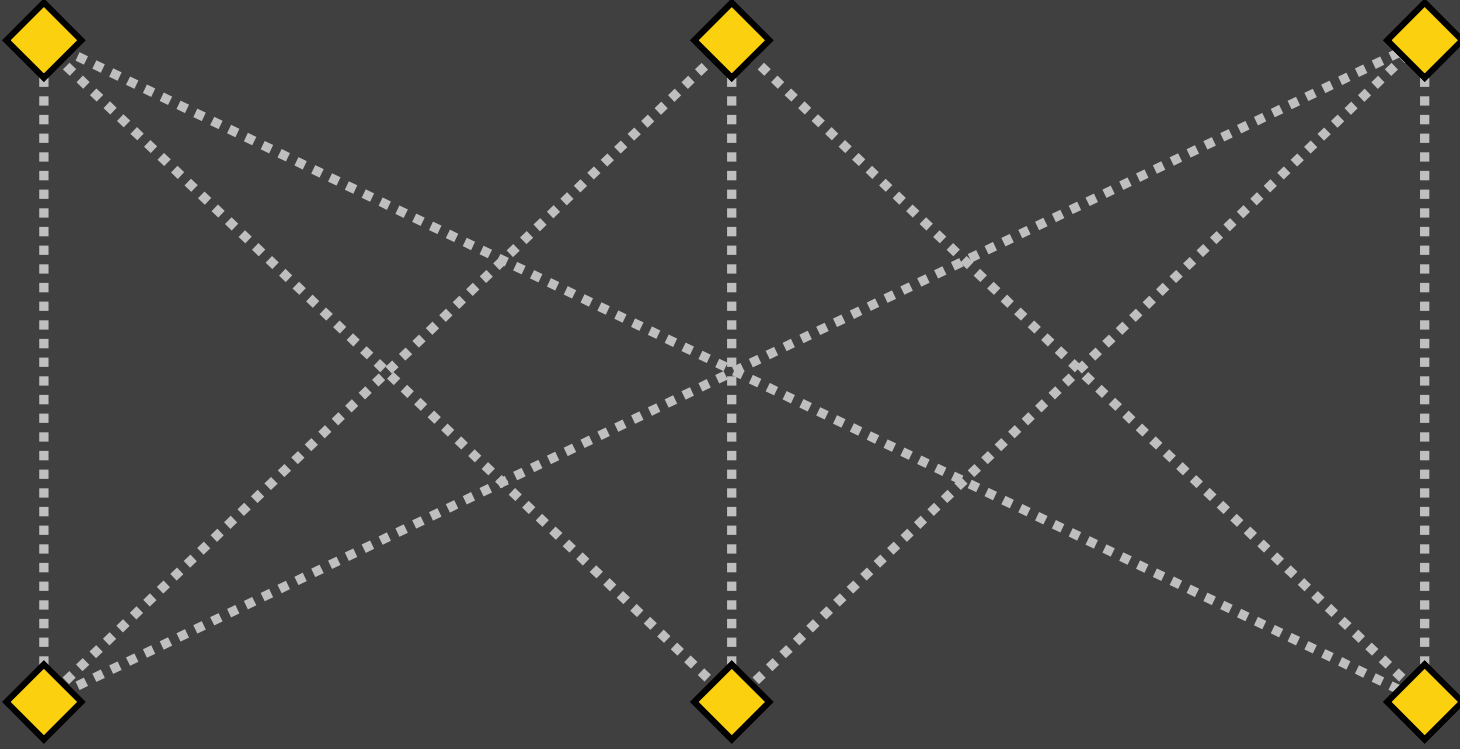


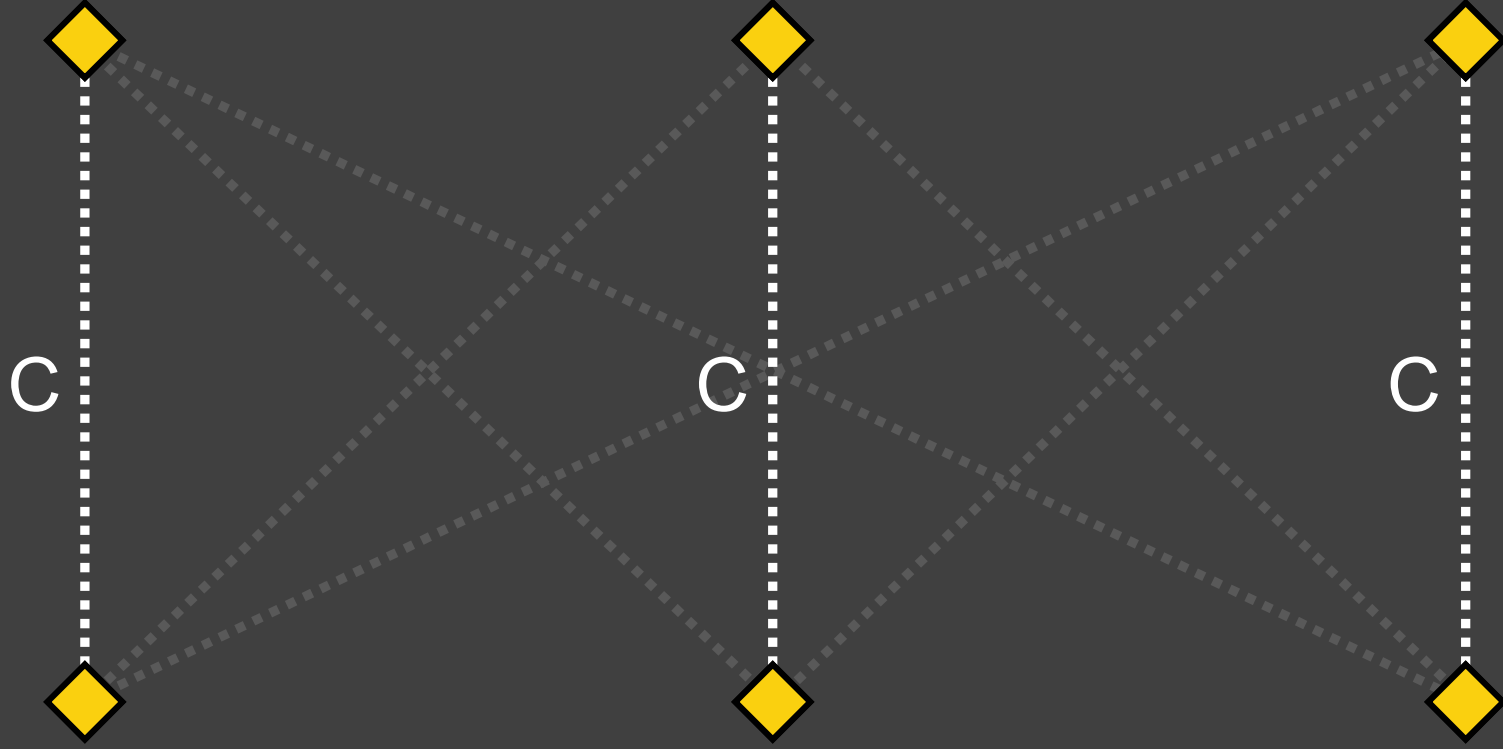


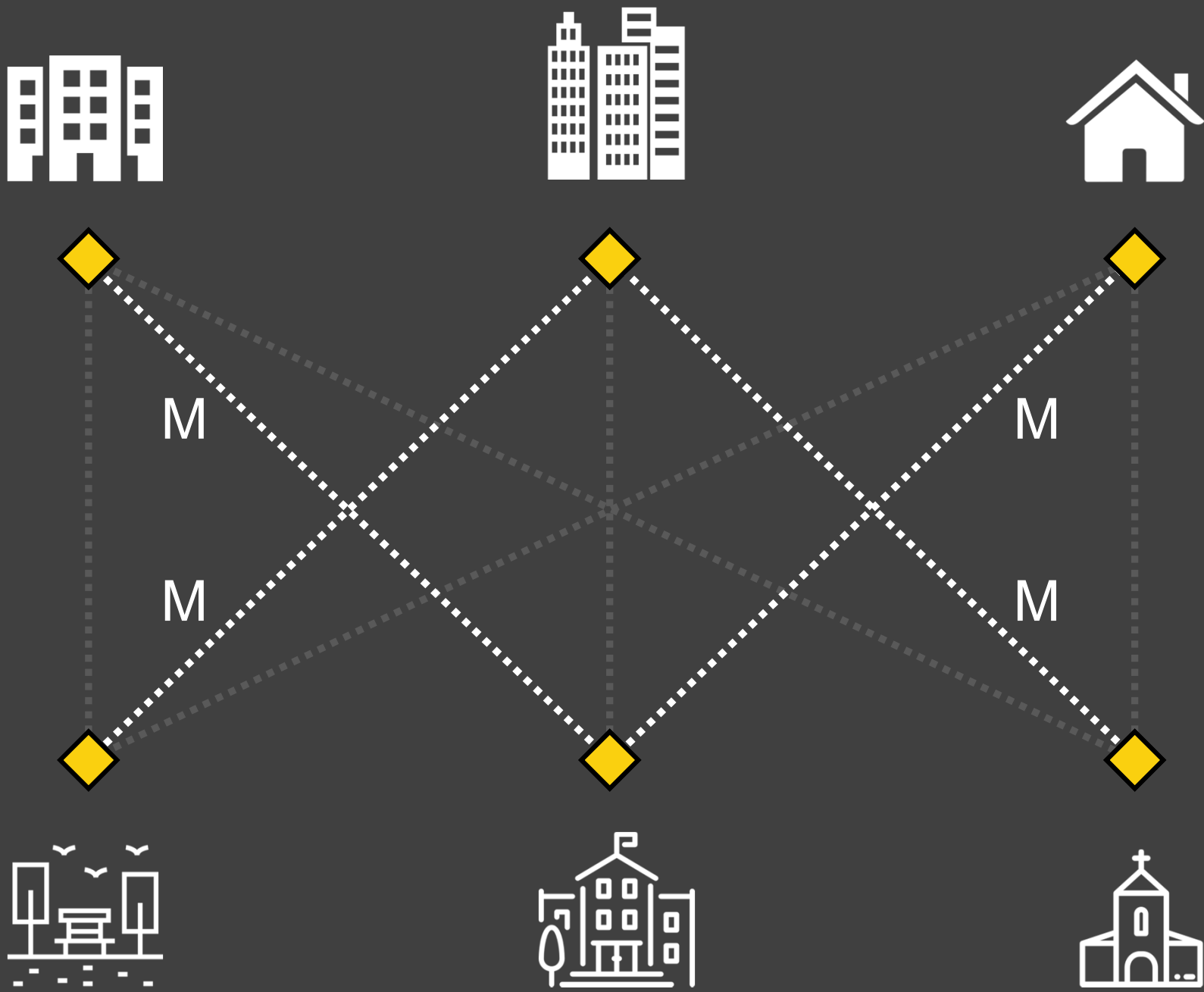
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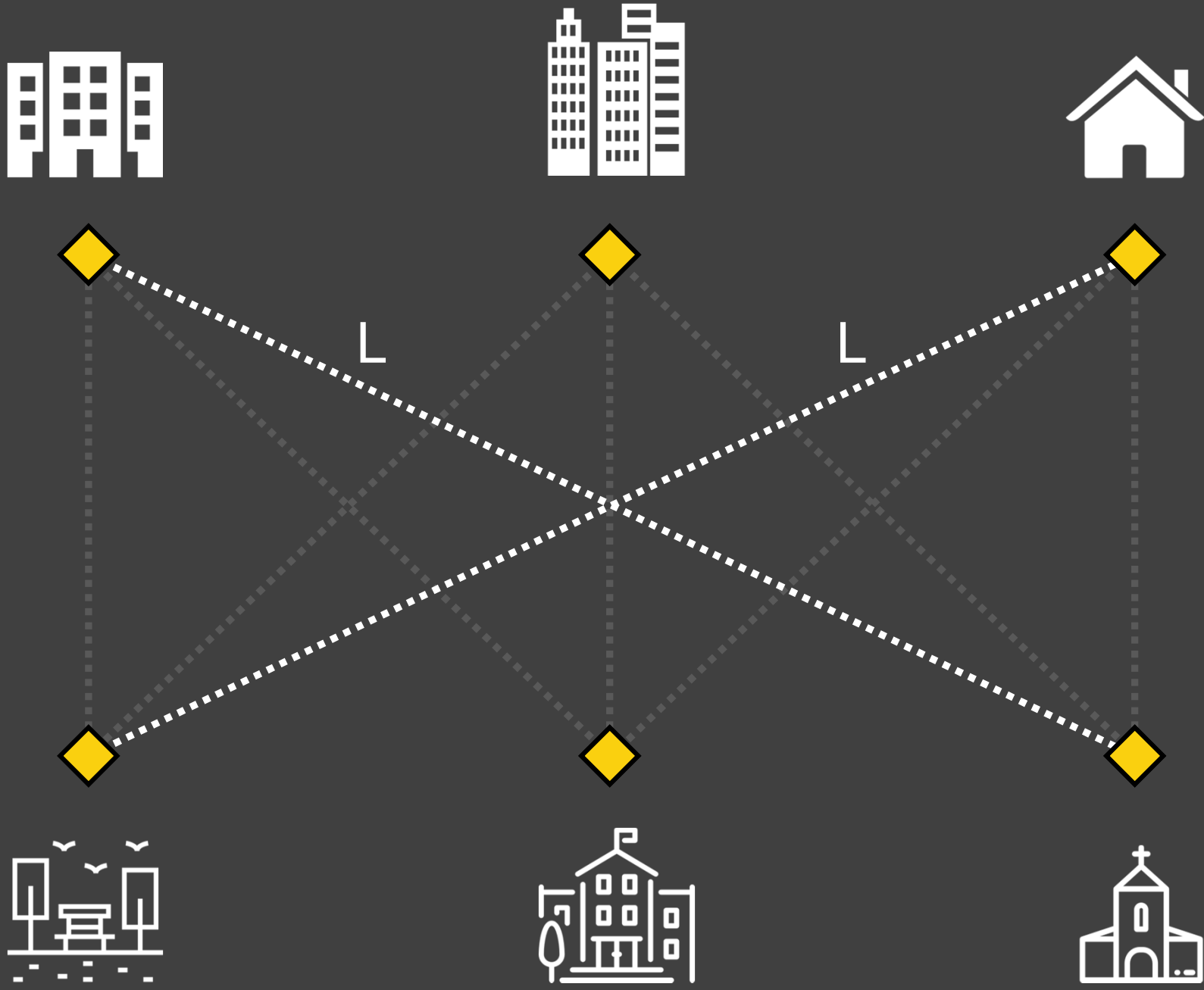
## Custos

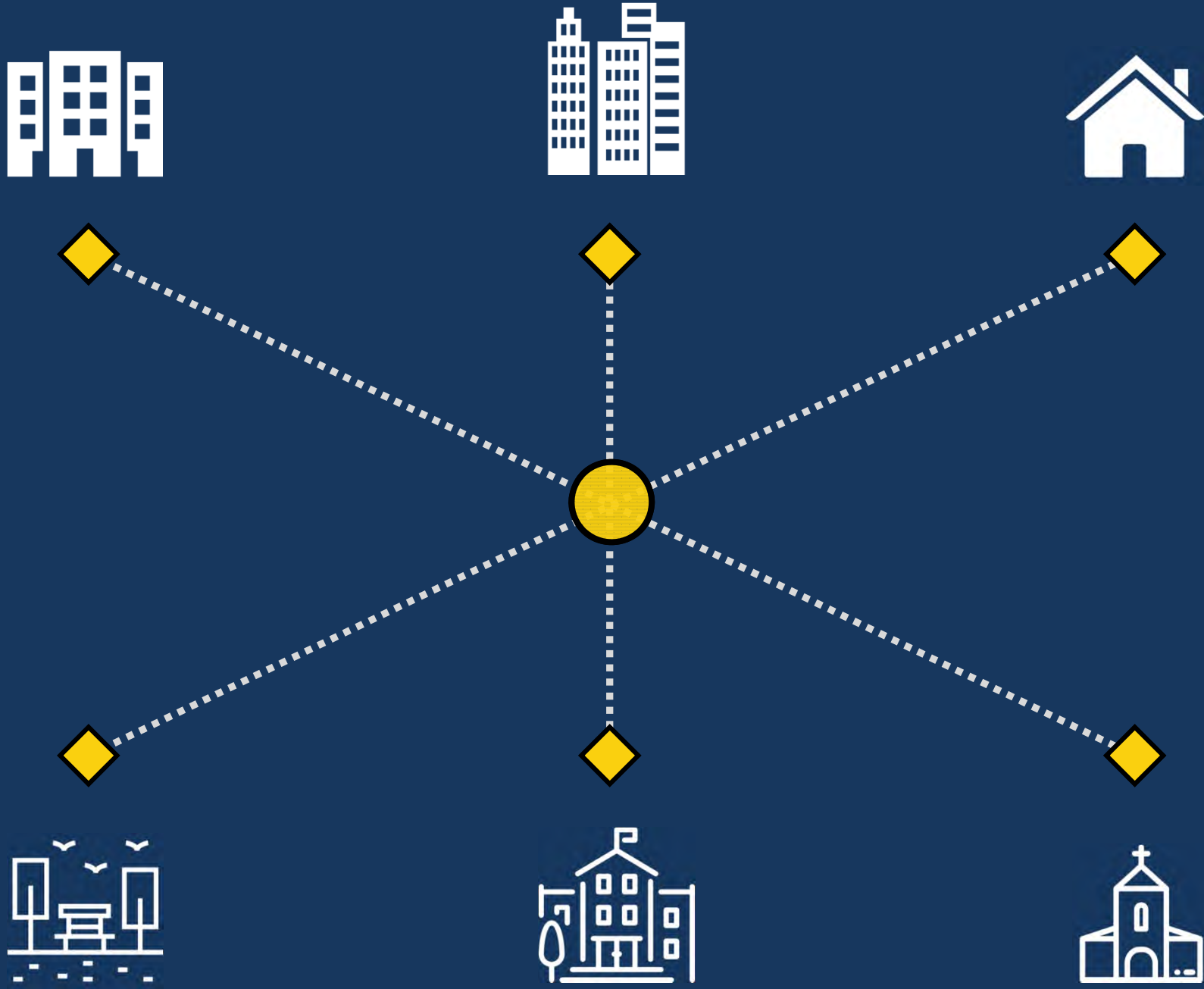


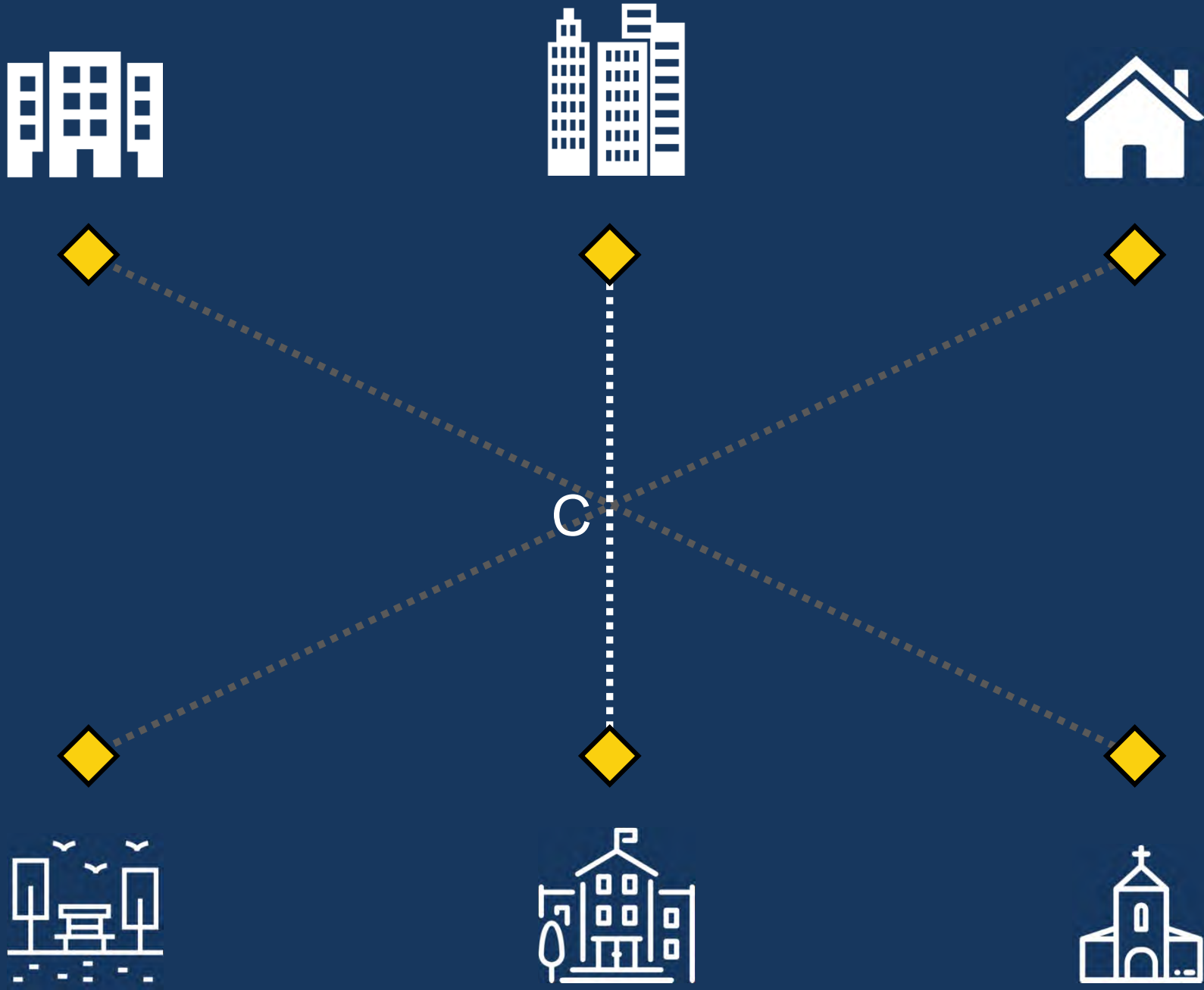




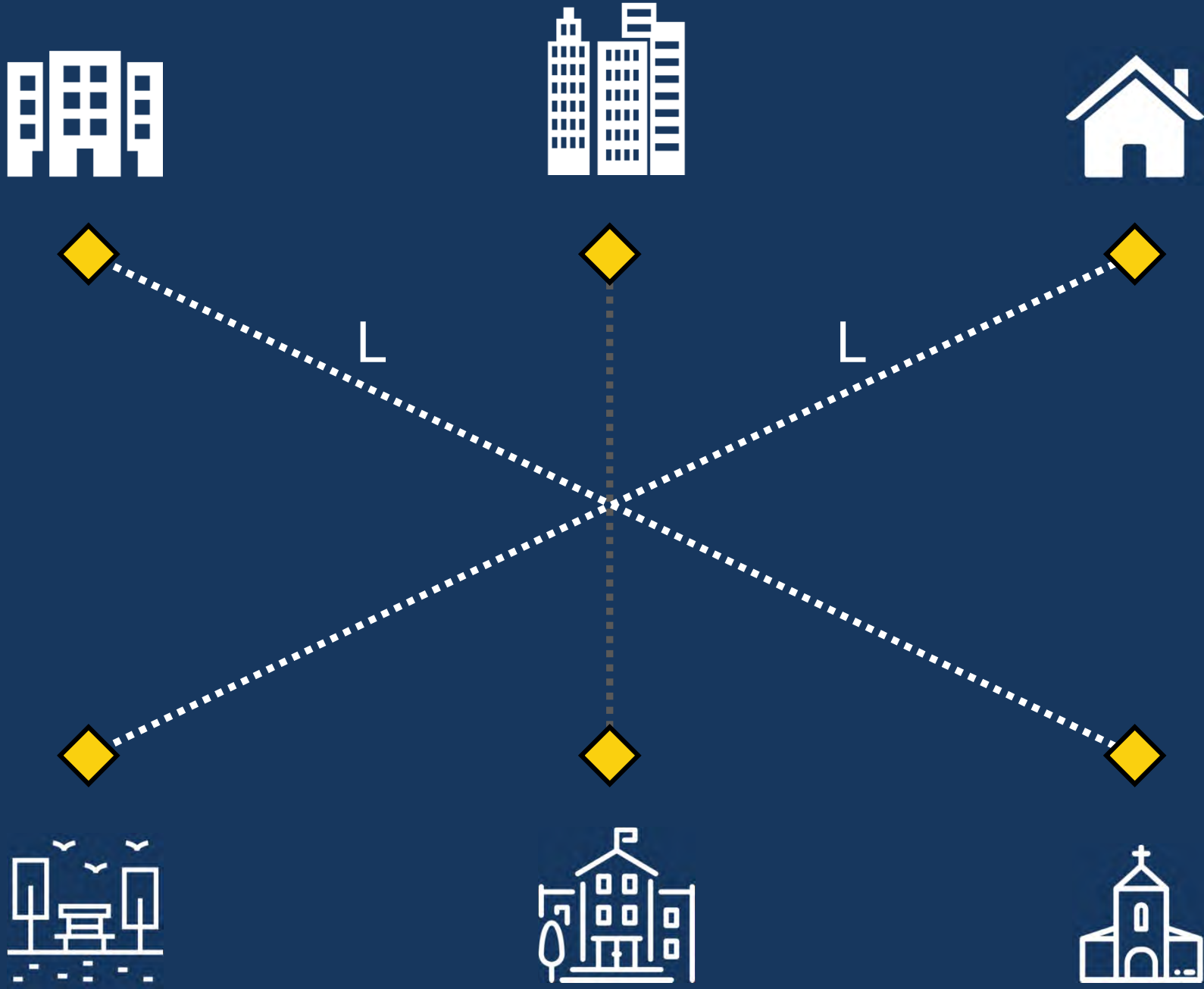














# CUSTOS – Sistema com Serviços Diretos

| Linha        | Tipo | Comprimento Viagem IDA + VOLTA (Km) | Tempo de Viagem IDA + VOLTA (Minutos) | Motorista | Cobrador | Km / Viagem | Custo Motorista (R\$ 36,00/hora)* | Custo Cobrador (R\$ 24,00/hora)* | Combustível e Manutenção (R\$ 2,00/Km)* | TOTAL LINHA |
|--------------|------|-------------------------------------|---------------------------------------|-----------|----------|-------------|-----------------------------------|----------------------------------|---|-------------|
| 1            | C    | 6                                   | 20                                    | 1         | 1        | 12          | R\$ 12,00                         | R\$ 8,00                         | R\$ 2,10                                | R\$ 22,10   |
| 2            | M    | 10                                  | 30                                    | 1         | 1        | 20          | R\$ 18,00                         | R\$ 12,00                        | R\$ 3,50                                | R\$ 33,50   |
| 3            | L    | 14                                  | 40                                    | 1         | 1        | 28          | R\$ 24,00                         | R\$ 16,00                        | R\$ 4,90                                | R\$ 44,90   |
| 4            | M    | 10                                  | 30                                    | 1         | 1        | 20          | R\$ 18,00                         | R\$ 12,00                        | R\$ 3,50                                | R\$ 33,50   |
| 5            | C    | 6                                   | 20                                    | 1         | 1        | 12          | R\$ 12,00                         | R\$ 8,00                         | R\$ 2,10                                | R\$ 22,10   |
| 6            | M    | 10                                  | 30                                    | 1         | 1        | 20          | R\$ 18,00                         | R\$ 12,00                        | R\$ 3,50                                | R\$ 33,50   |
| 7            | L    | 14                                  | 40                                    | 1         | 1        | 28          | R\$ 24,00                         | R\$ 16,00                        | R\$ 4,90                                | R\$ 44,90   |
| 8            | M    | 10                                  | 30                                    | 1         | 1        | 20          | R\$ 18,00                         | R\$ 12,00                        | R\$ 3,50                                | R\$ 33,50   |
| 9            | C    | 6                                   | 20                                    | 1         | 1        | 12          | R\$ 12,00                         | R\$ 8,00                         | R\$ 2,10                                | R\$ 22,10   |
| <b>TOTAL</b> |      |                                     | <b>260</b>                            | <b>9</b>  | <b>9</b> | <b>172</b>  | <b>R\$ 156,00</b>                 | <b>R\$ 104,00</b>                | <b>R\$ 30,10</b>                        |             |

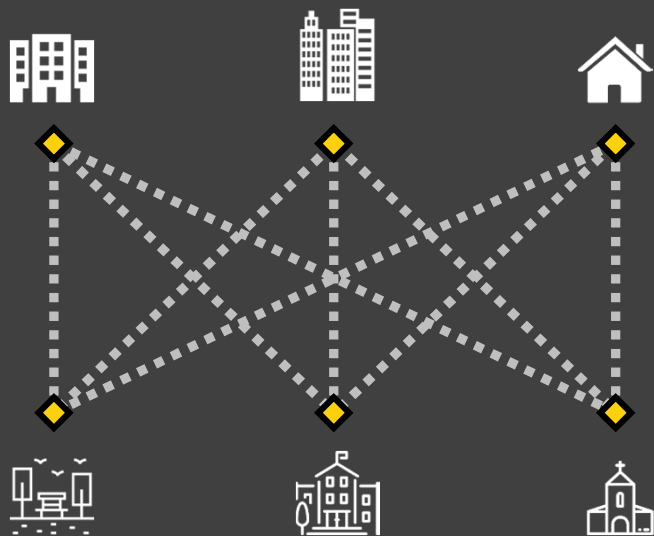
**CUSTO TOTAL (Uma viagem por linha): R\$ 290,10**

\*Valores ilustrativos para comparação entre sistemas.

| Linha        | Tipo | Comprimento Viagem IDA + VOLTA (Km) | Tempo de Viagem IDA + VOLTA (Minutos) | Motorista | Cobrador | Km / Viagem | Custo Motorista (R\$ 36/hora)* | Custo Cobrador (R\$ 24/hora)* | Custo Combustível (R\$ 0,35L/Km)* | TOTAL LINHA |
|--------------|------|-------------------------------------|---------------------------------------|-----------|----------|-------------|--------------------------------|-------------------------------|-----------------------------------|-------------|
| 3            | L    | 14                                  | 40                                    | 1         | 1        | 28          | R\$ 24,00                      | R\$ 16,00                     | R\$ 4,90                          | R\$ 44,90   |
| 5            | C    | 6                                   | 20                                    | 1         | 1        | 12          | R\$ 12,00                      | R\$ 8,00                      | R\$ 2,10                          | R\$ 22,10   |
| 7            | L    | 14                                  | 40                                    | 1         | 1        | 28          | R\$ 24,00                      | R\$ 16,00                     | R\$ 4,90                          | R\$ 44,90   |
| <b>TOTAL</b> |      |                                     | <b>100</b>                            | <b>3</b>  | <b>3</b> | <b>68</b>   | <b>R\$ 60,00</b>               | <b>R\$ 40,00</b>              | <b>R\$ 11,90</b>                  |             |

**CUSTO TOTAL (Uma viagem por linha): R\$ 111,90**

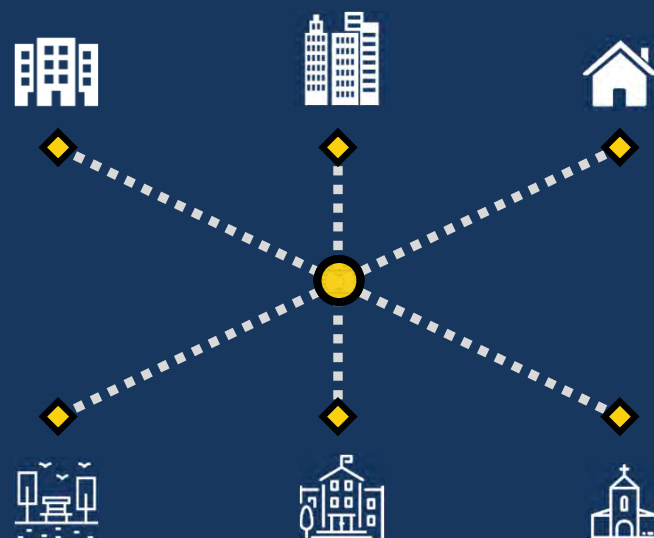
\*Valores ilustrativos para comparação entre sistemas.



**DUAS Viagens por Linha**

**R\$ 580,20**

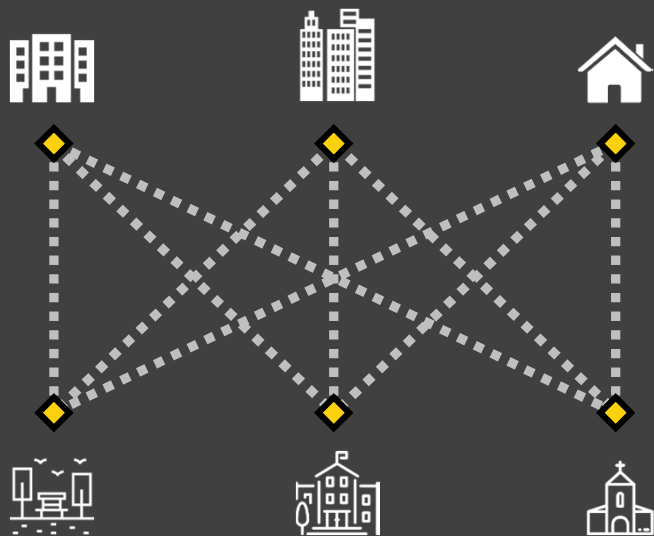
**Frequência 2,5 vezes maior  
com um custo menor**



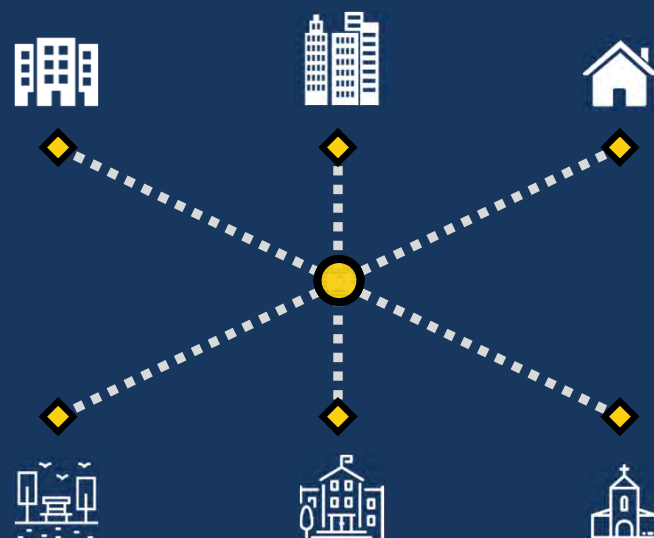
**CINCO Viagens por Linha**

**R\$ 559,50**

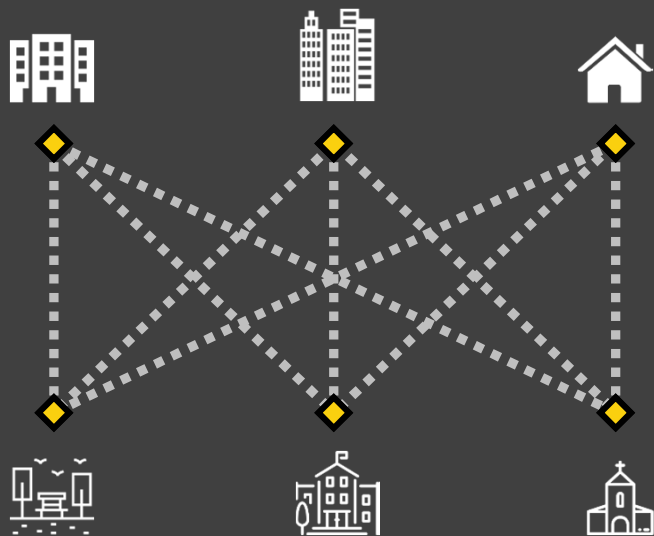




- Viagens mais **CURTAS**
- Mais **COMPLEXO**
- Maior tempo de **ESPERA**
- Menor **FREQUÊNCIA**
- Maior **CUSTO** nas Horas-Pico



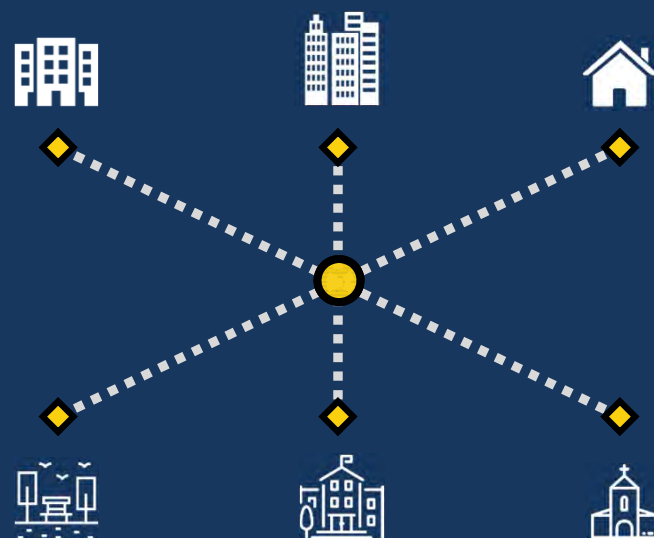
- Menor **TEMPO** de viagem
- Maior **FREQUÊNCIA**
- Maior **CONFIABILIDADE**
- Maior oferta de **HORÁRIOS**
- **ECONOMIA** de escala



Frequência

Headway

- Linhas C: 3 / hora 20 Min
- Linhas M: 2 / hora 30 Min
- Linhas L: 1,5 / hora 40 Min



Frequência

Headway

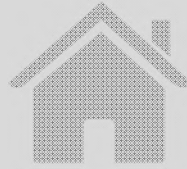
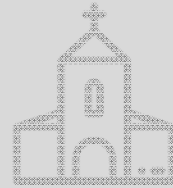
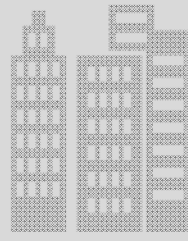
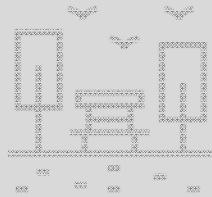
- Linha C: 7,5 / hora 8 Min
- Linhas L: 3,75 / hora 16 Min

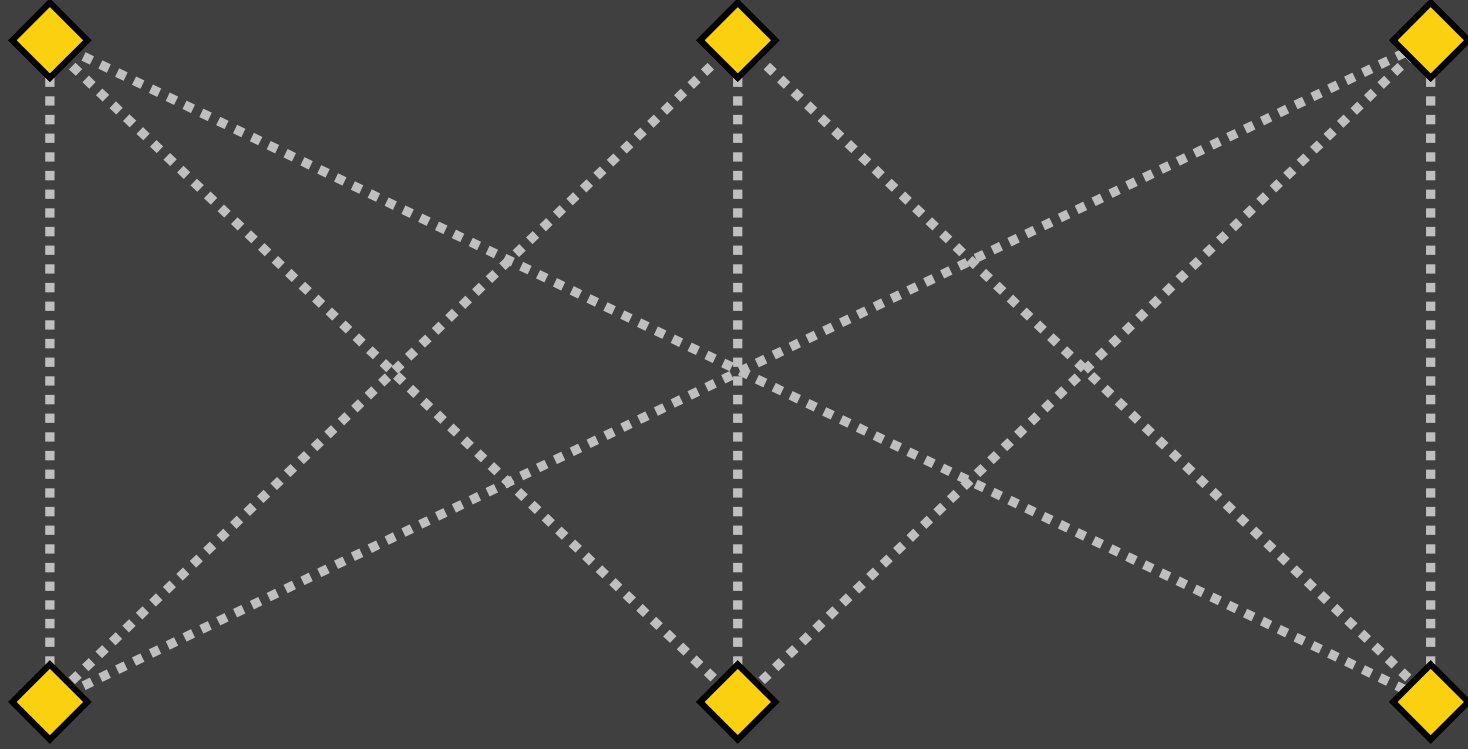
# COMPARATIVO

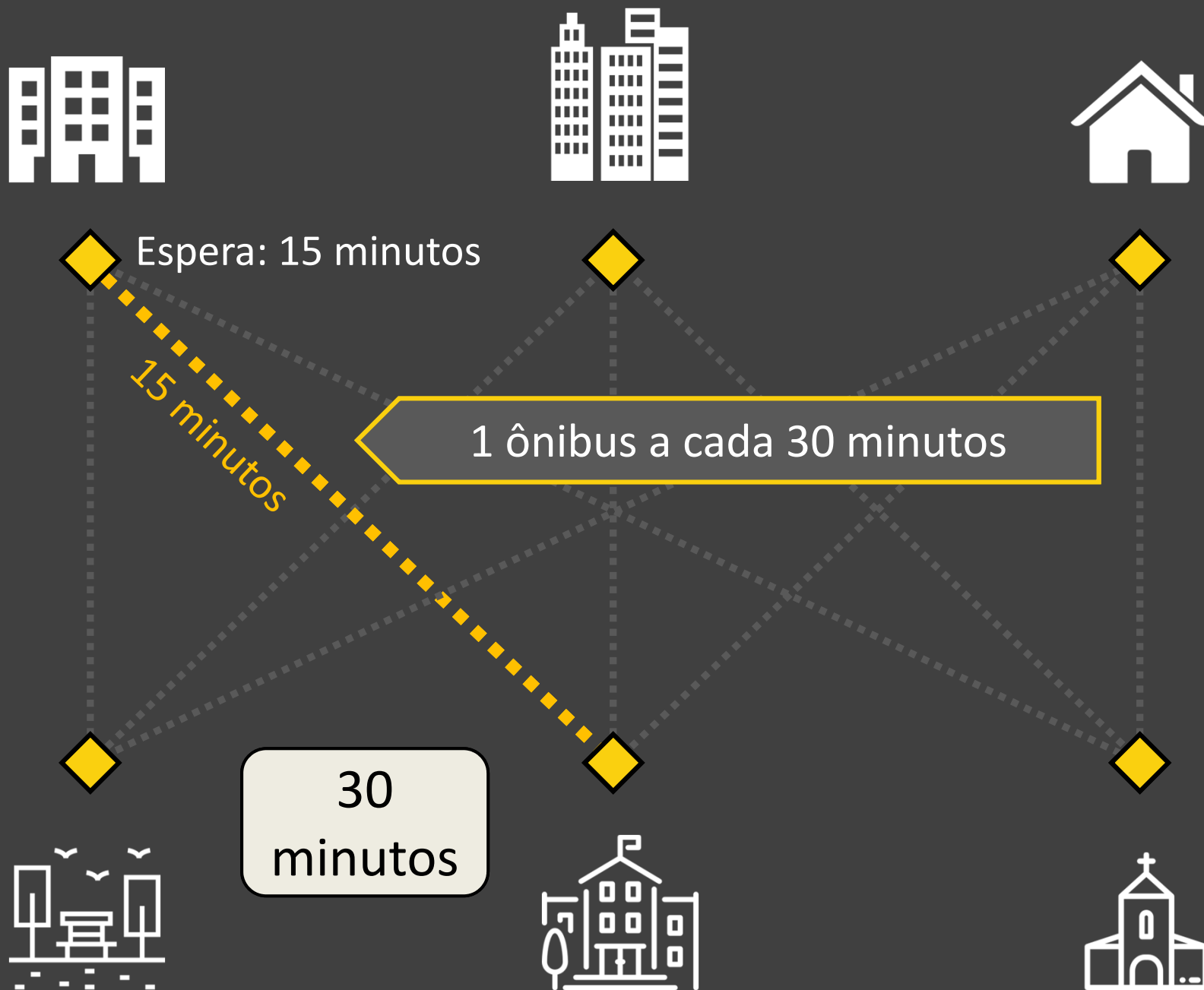
## Tempo de Viagem do Usuário

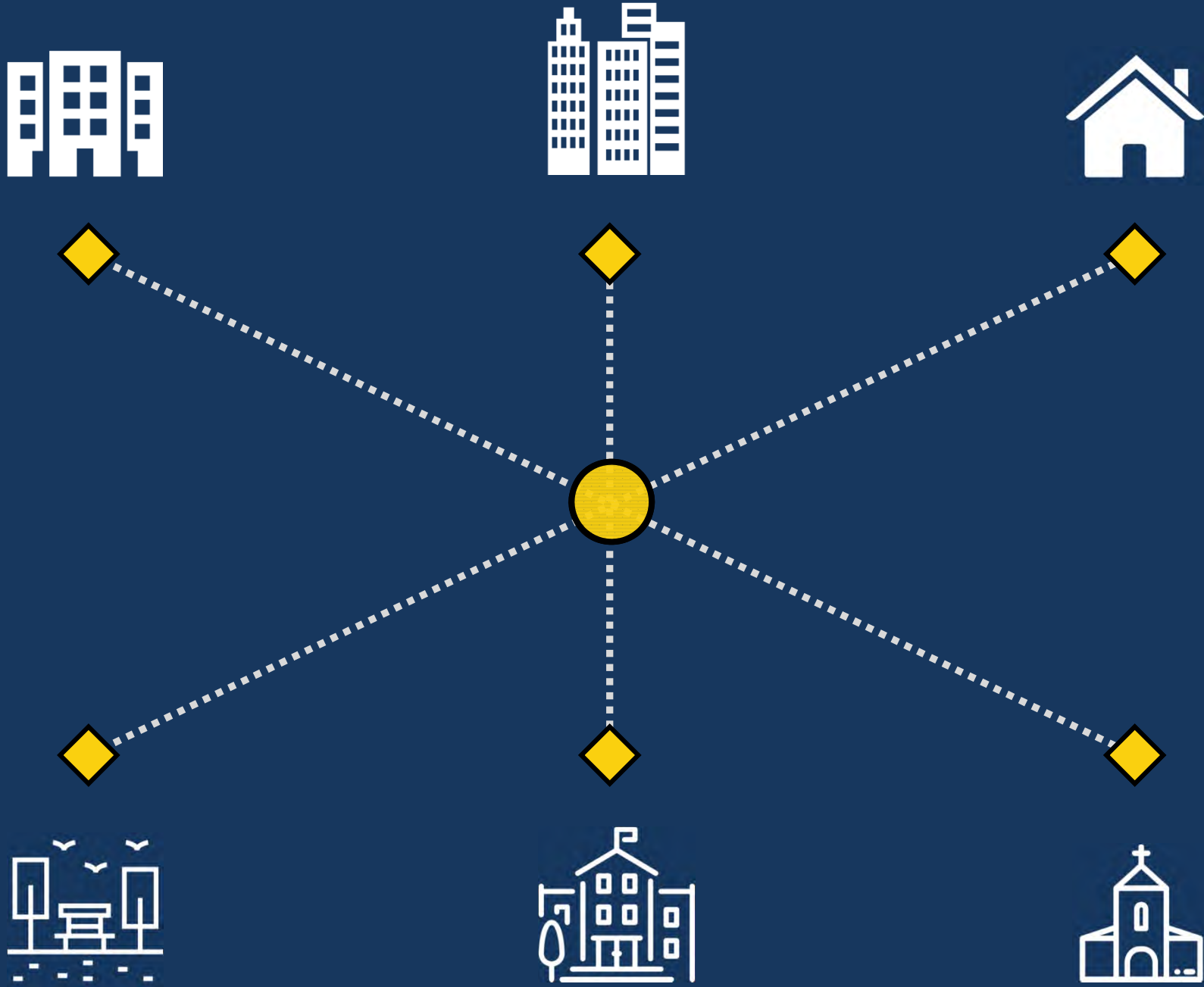


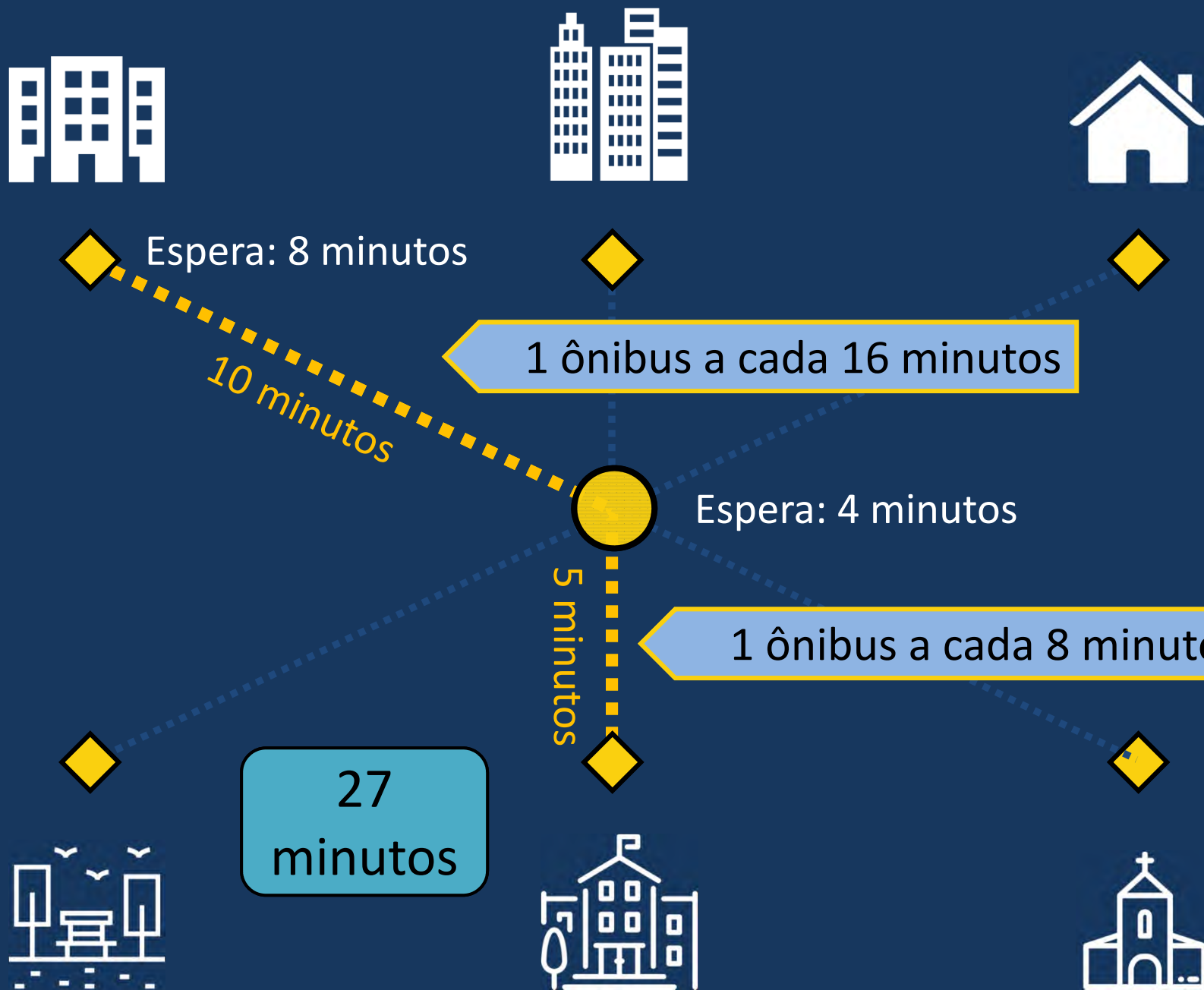


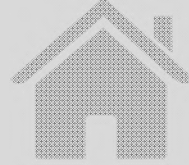
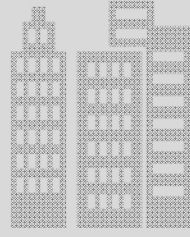
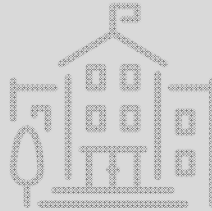
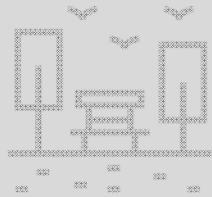


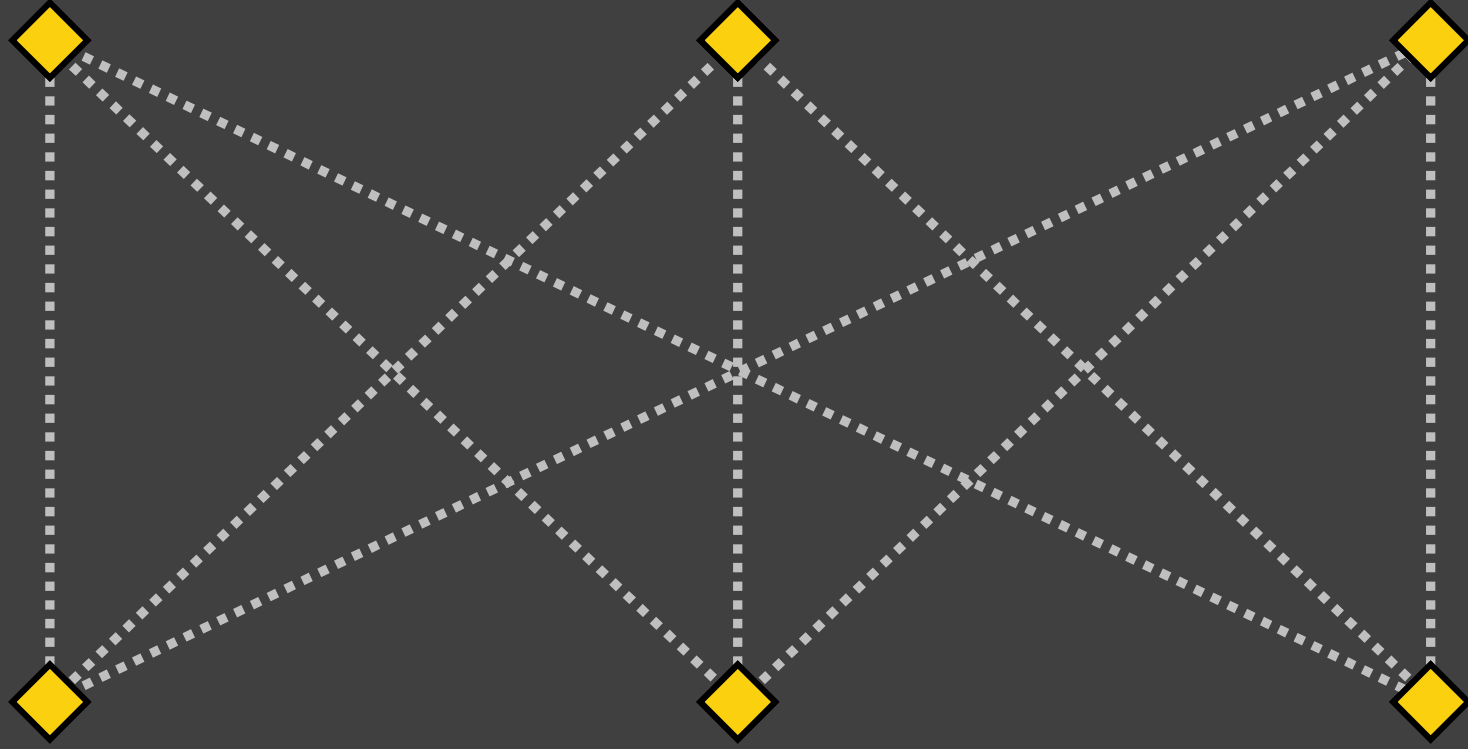


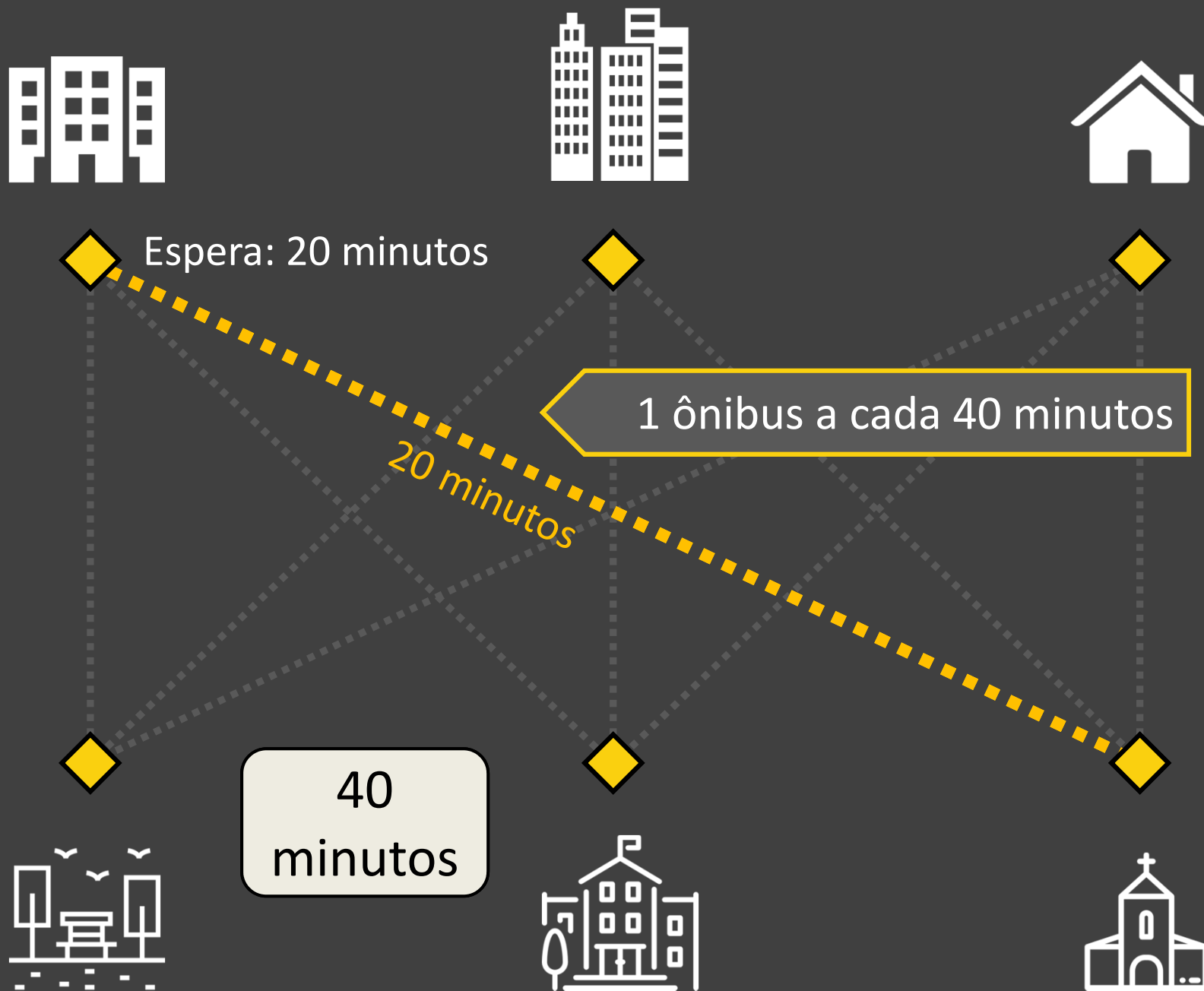




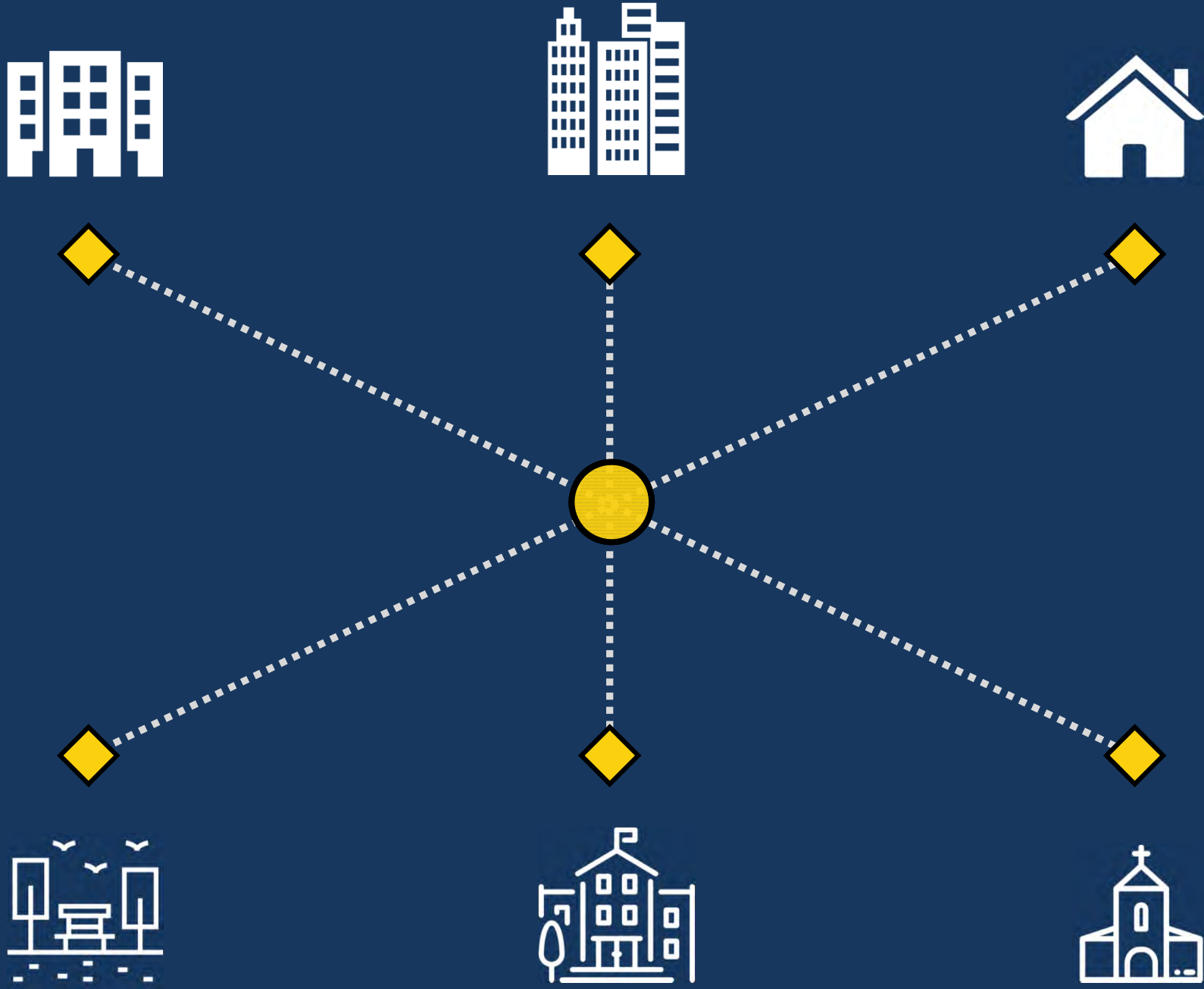


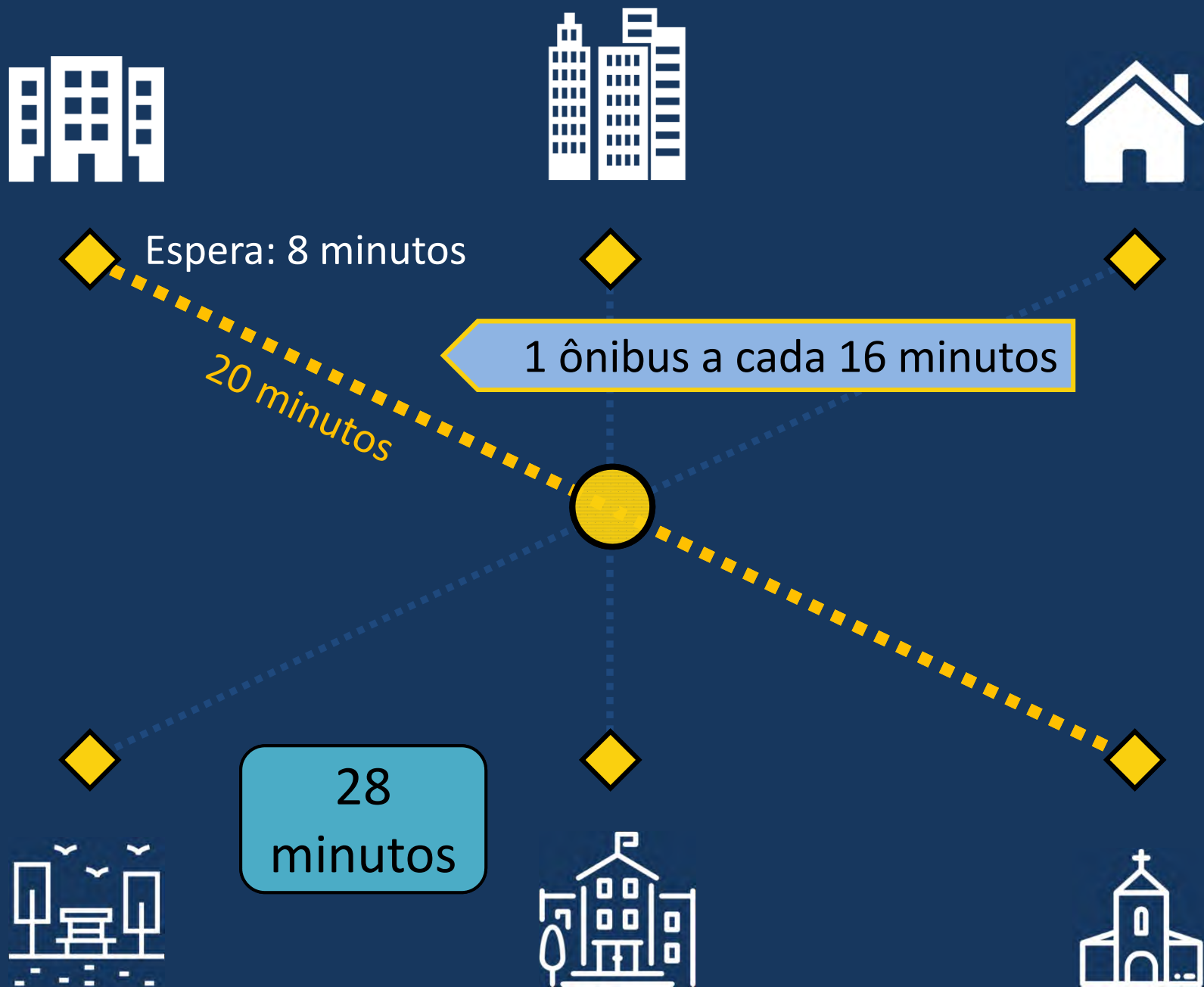


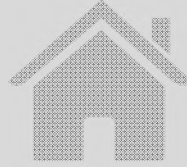
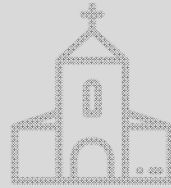
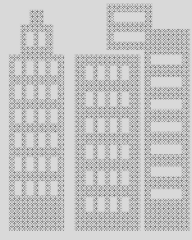
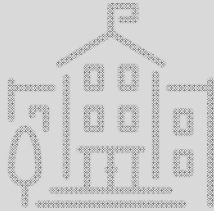


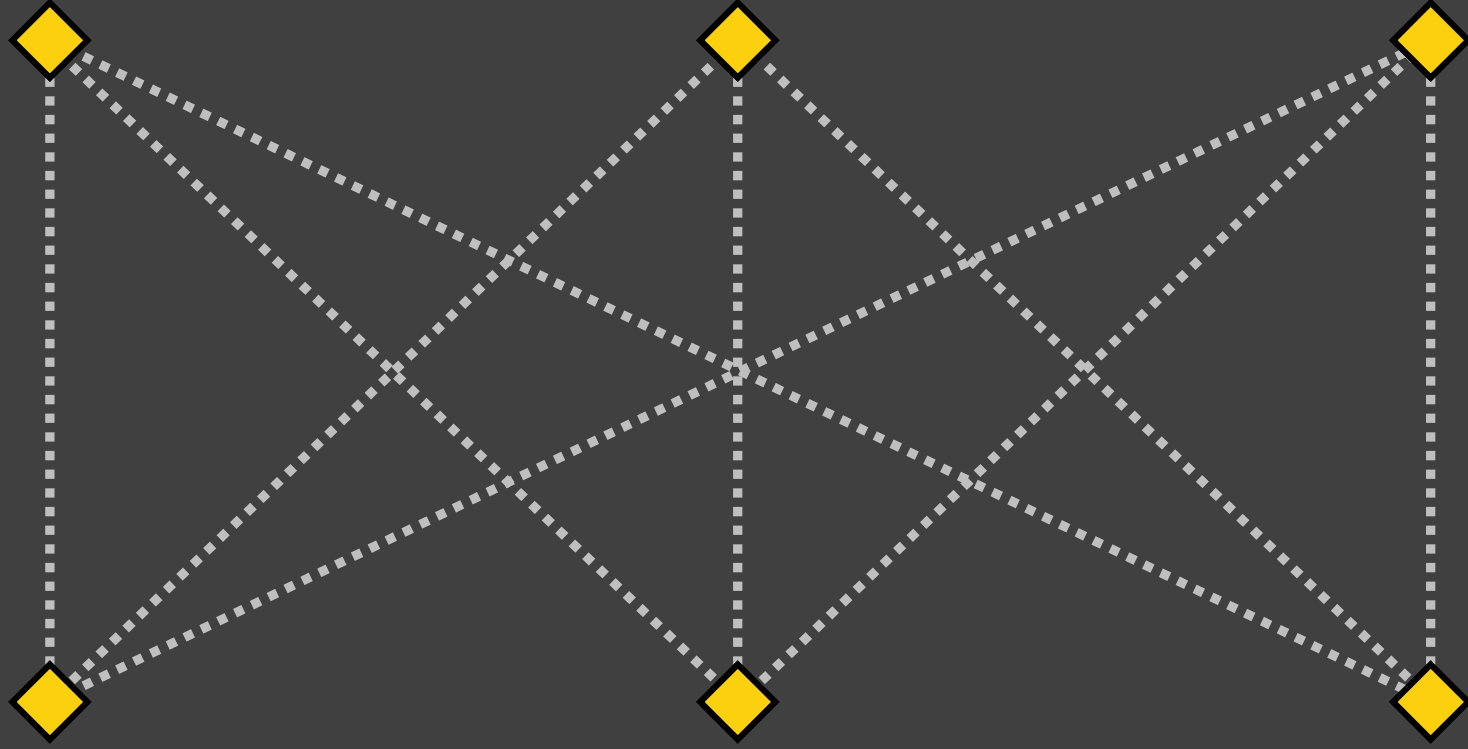


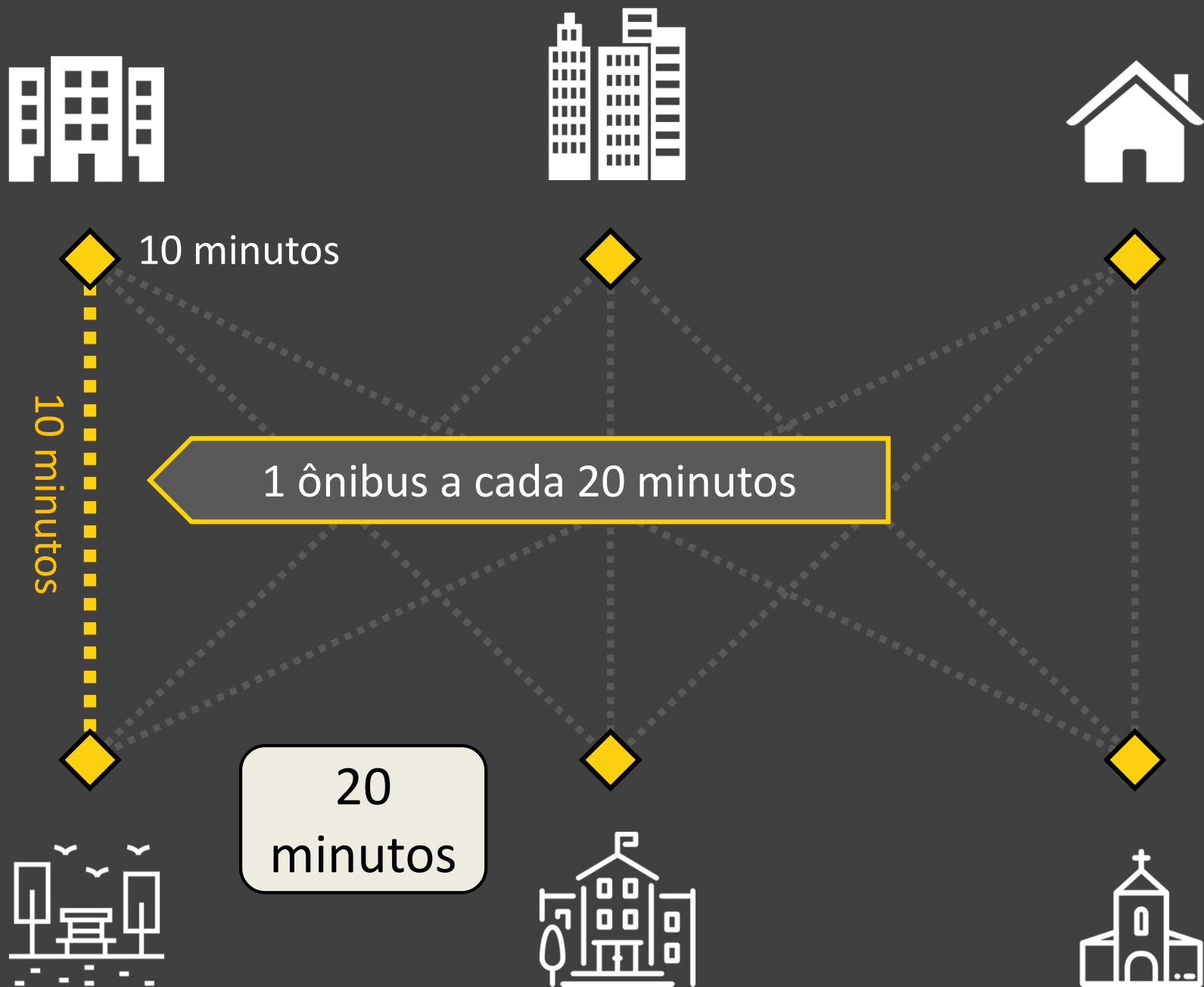


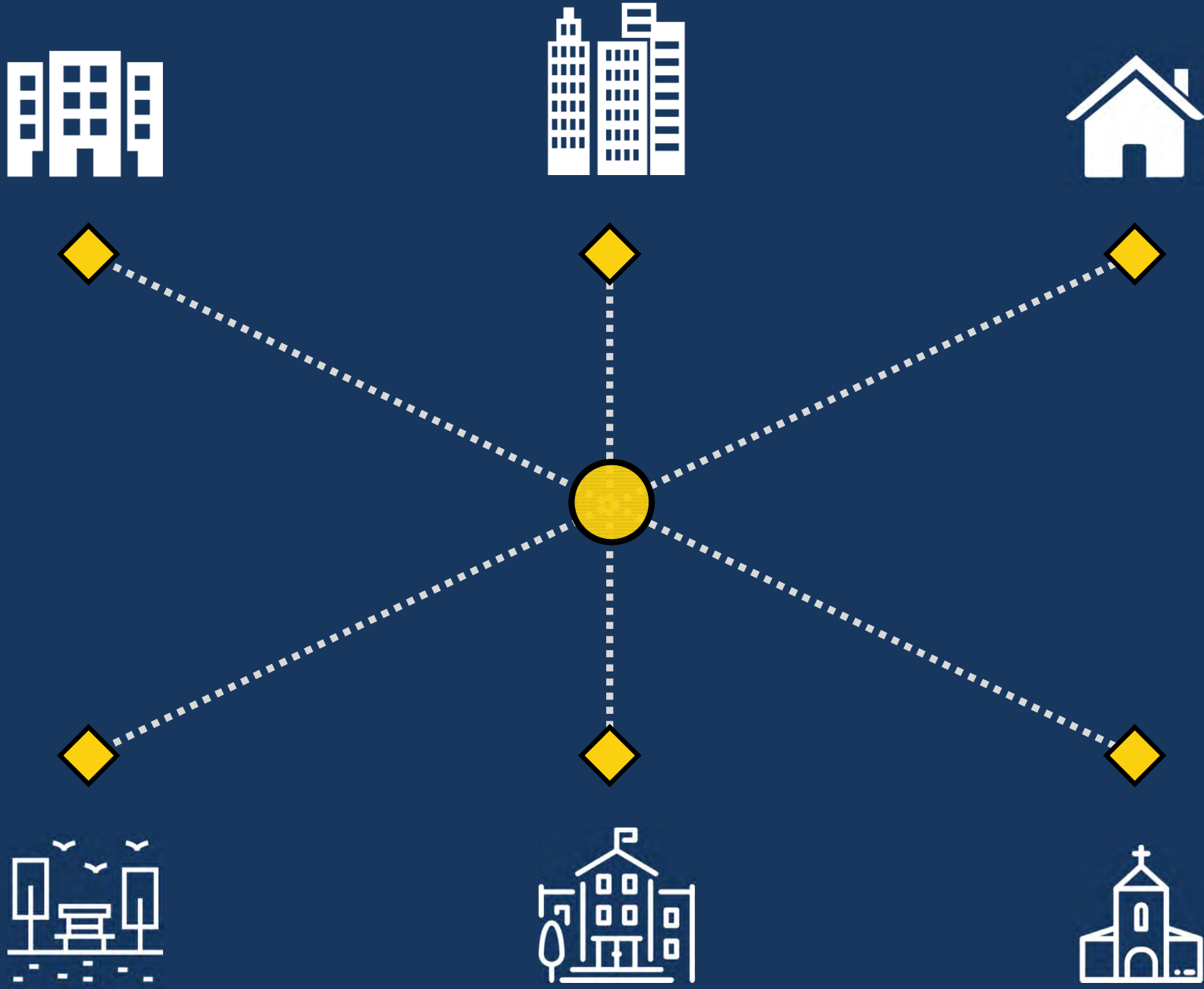


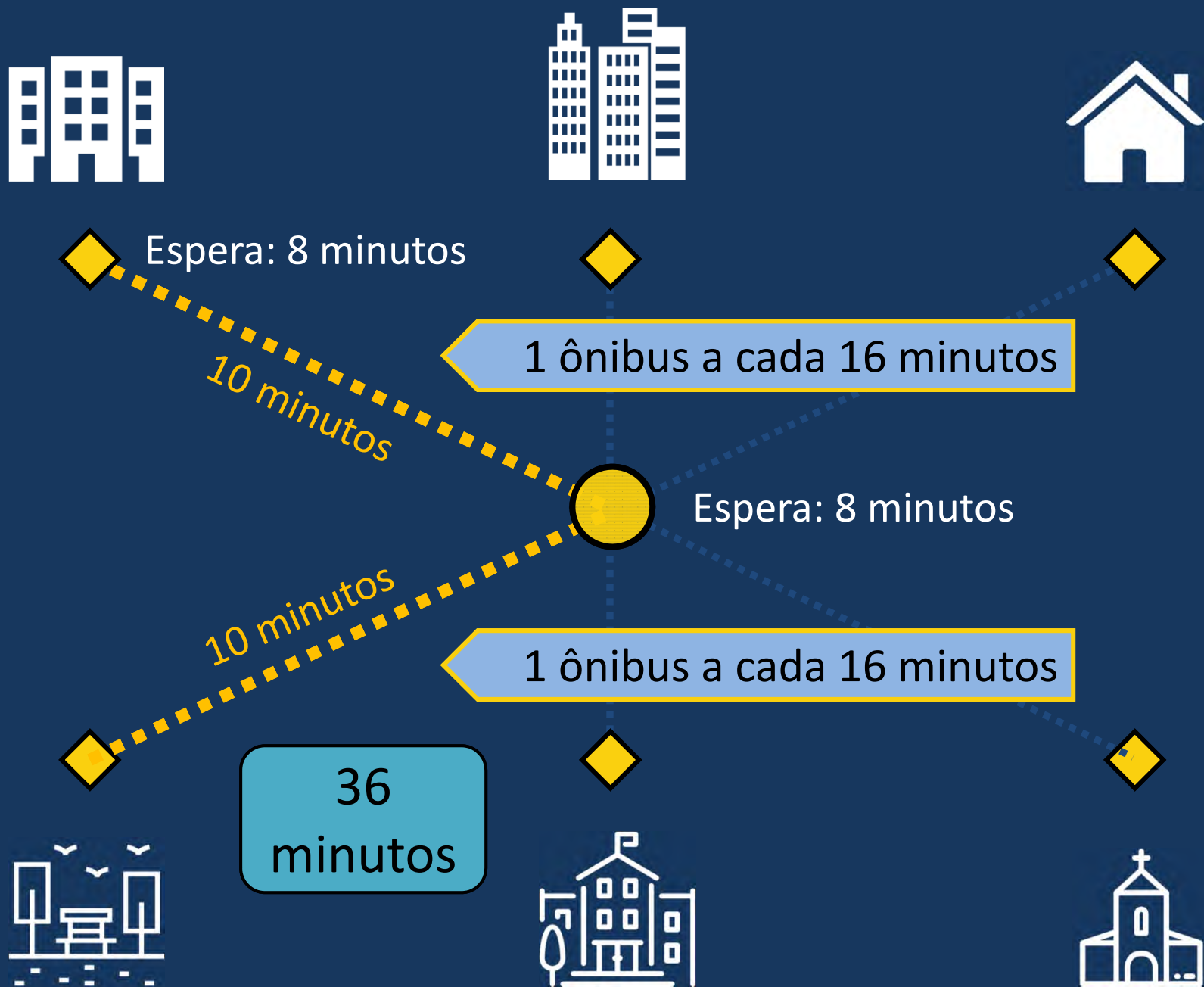












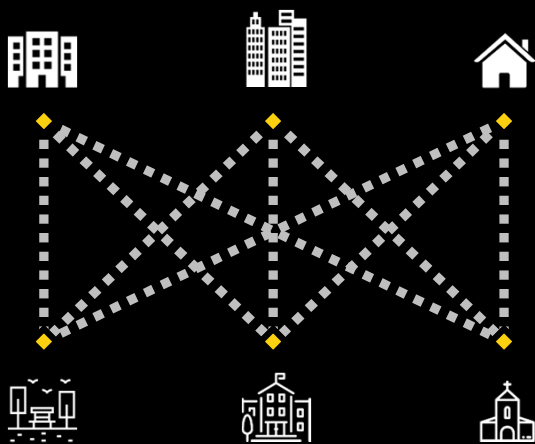
# SISTEMA TRONCO-ALIMENTADOR

- ✓ Mescla do sistema Direto com Conectado
- ✓ Conexões diretas entre pontos de maior demanda (Troncais)
- ✓ Conexões diretas entre pontos de menor demanda e Troncais
  - ✓ Conexões indiretas entre pontos de menor demanda



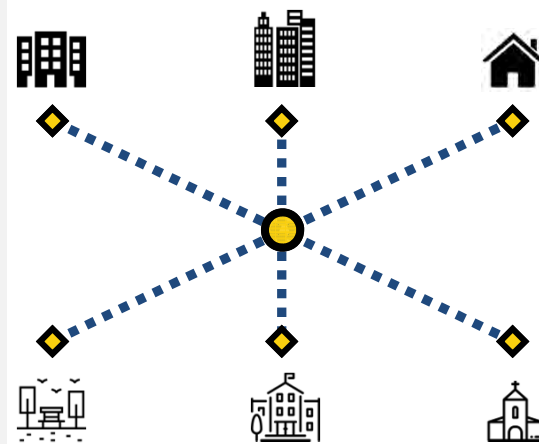


DIRETO



**IDEAL**  
Adequado à  
realidade local

CONECTADO





Bairro 1



Bairro 2



Bairro 3



Comércio,  
Serviços,  
Empresas



Bairro 3

Parque

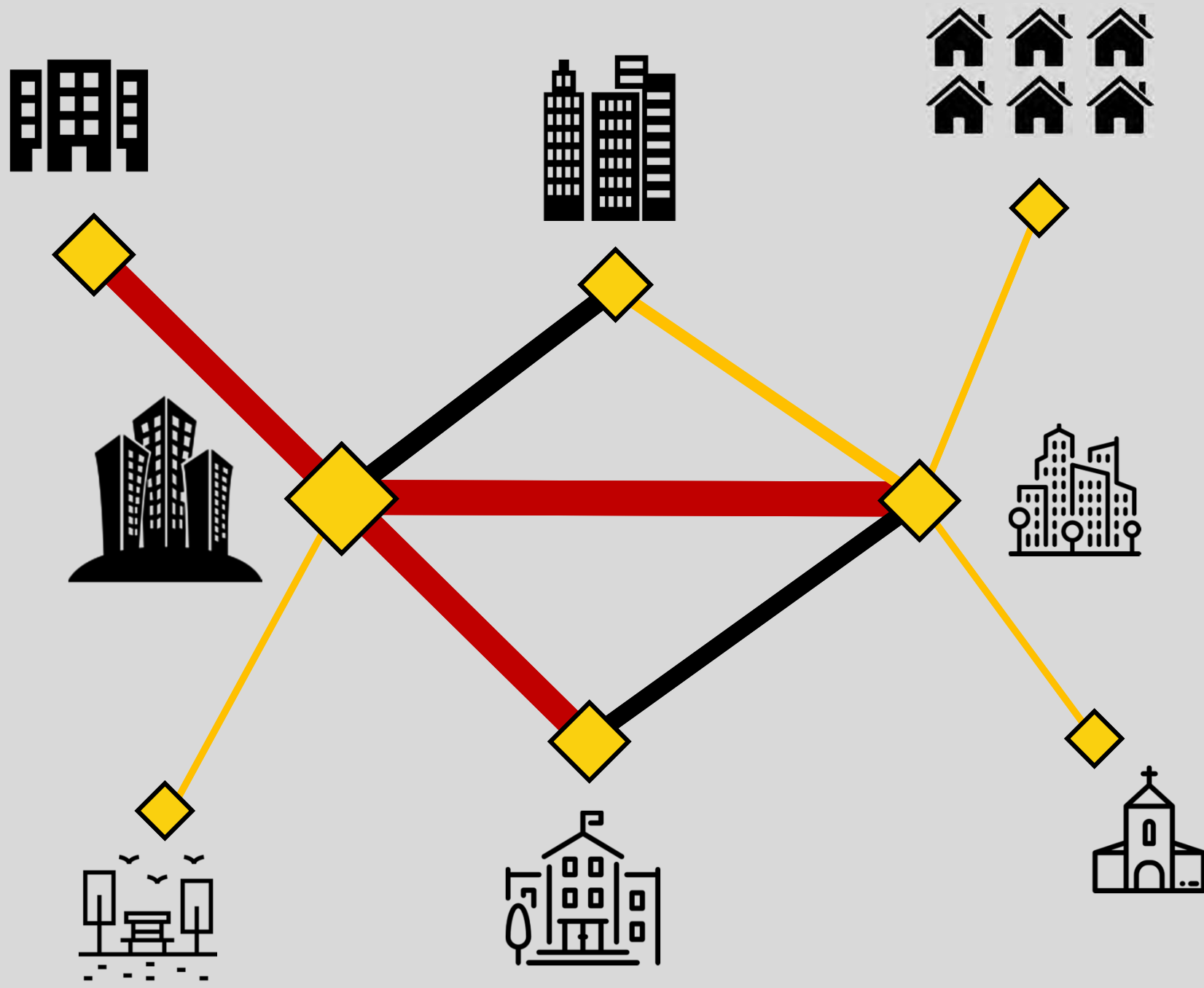


Universidade

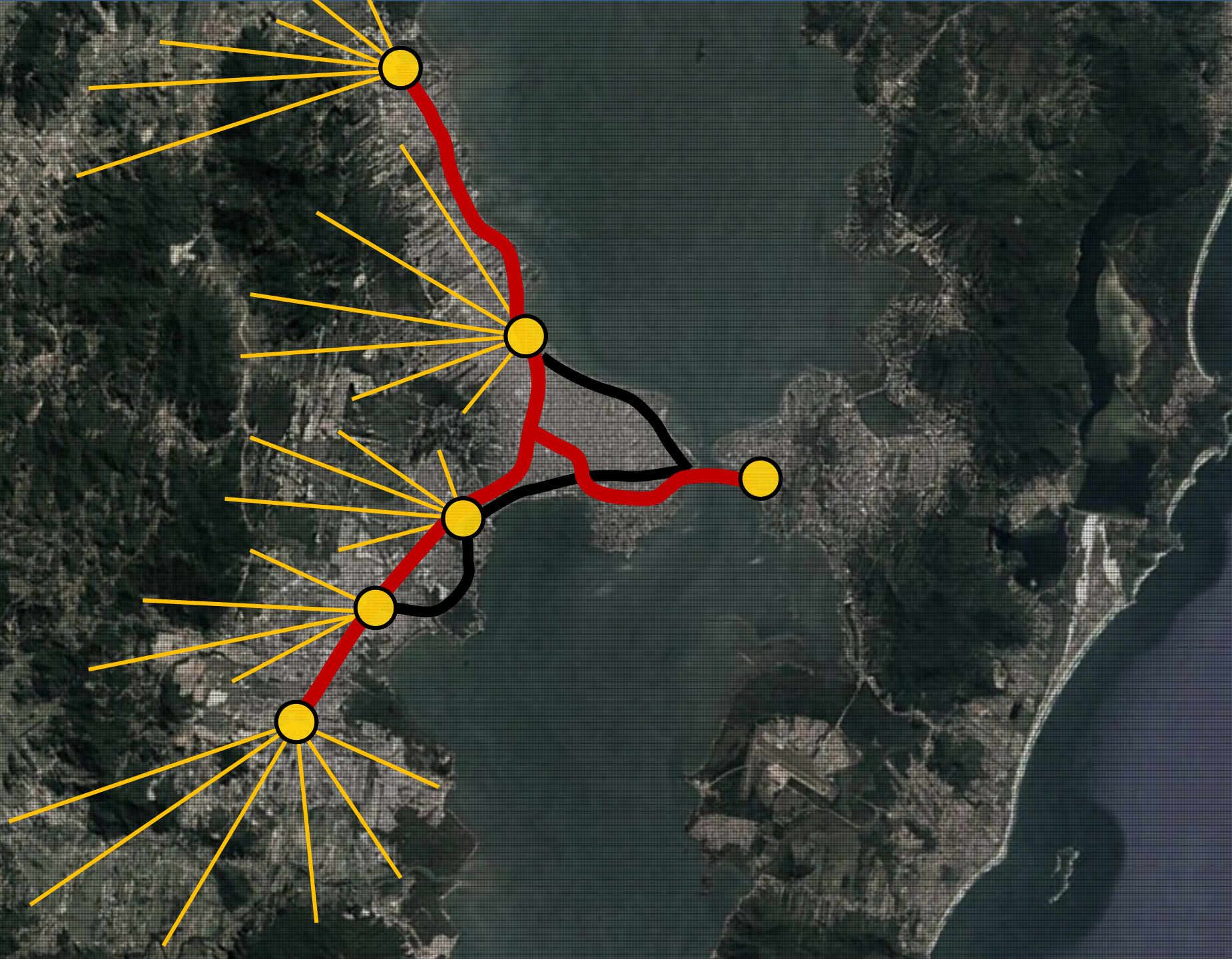


Centro  
Histórico











# PESQUISA COM USUÁRIOS DO TRANSPORTE COLETIVO INTERMUNICIPAL

# NEOTRANS



OBSERVATÓRIO  
DA MOBILIDADE URBANA  
**UFSC**



**UNIVERSIDADE FEDERAL  
DE SANTA CATARINA**

- **Realizada nos dias 7, 8 e 9 de junho de 2016**
- **TICEN e Terminal Cidade de Florianópolis**
- **Somente com usuários das linhas intermunicipais**
- **3.580 entrevistas**



# OBJETIVOS

1

Porcentagem das viagens da RMF para a Ilha de Santa Catarina que utilizam as linhas Intermunicipais e também as linhas Municipais de Florianópolis



# OBJETIVOS

2

Porcentagem das viagens da RMF para a Ilha de Santa Catarina que caminham até seus destinos a partir dos terminais.





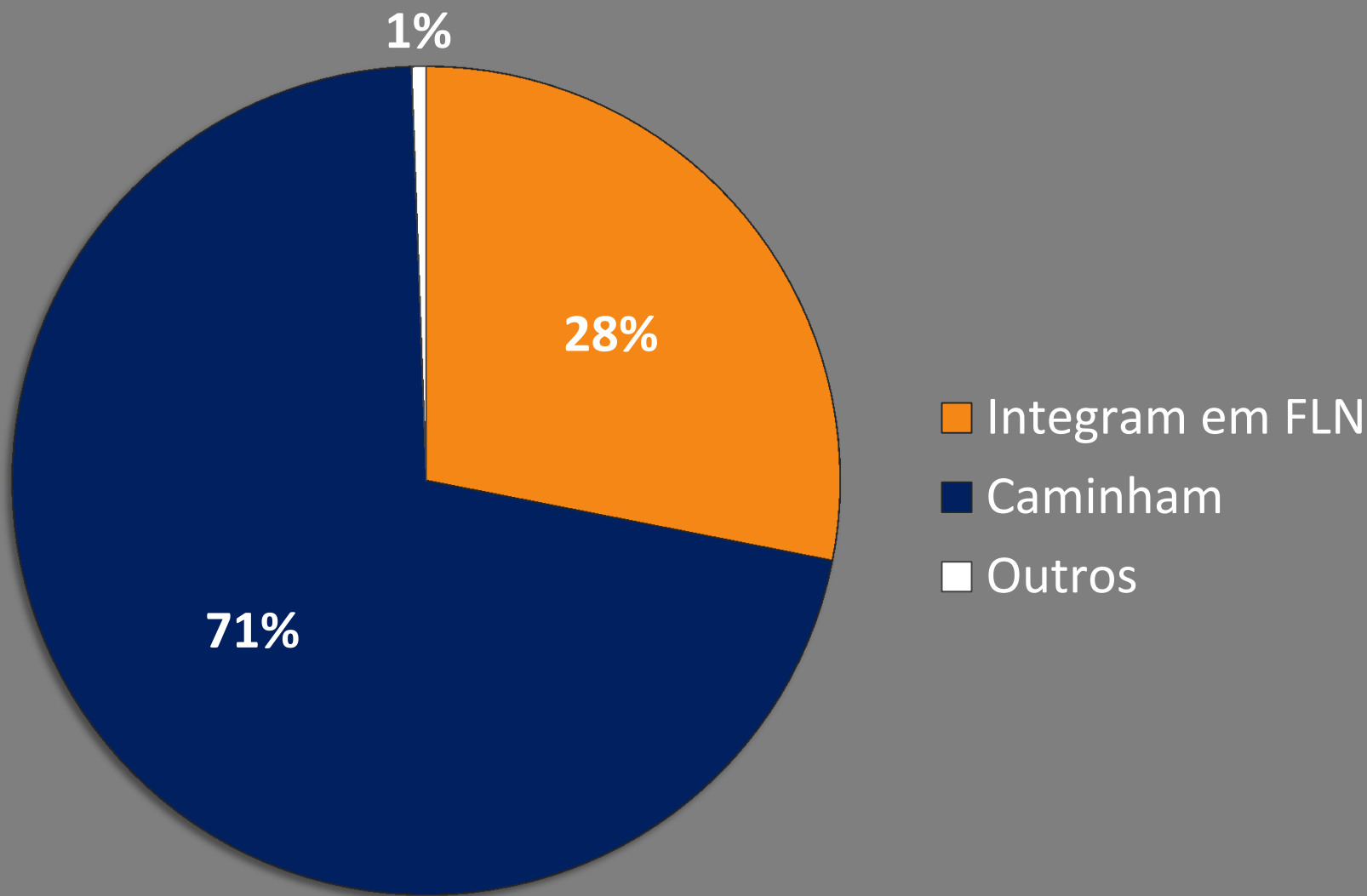
3

# OBJETIVOS

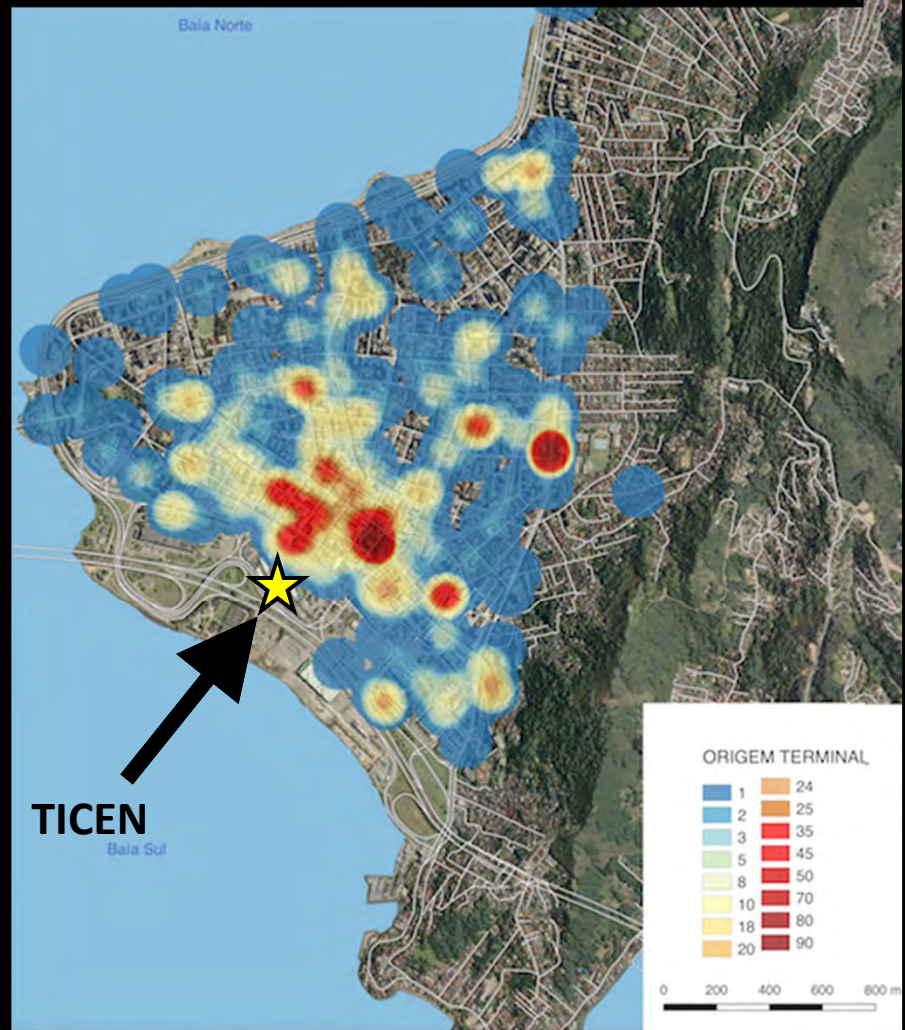
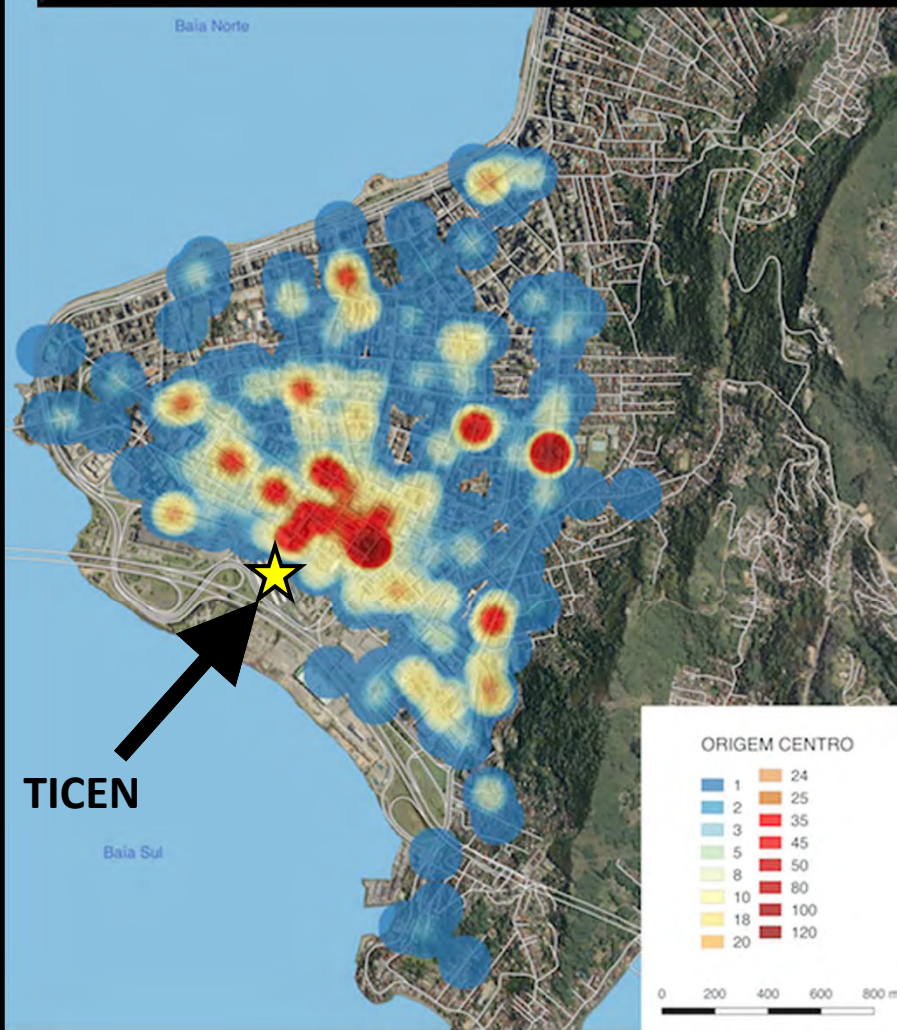
**Distância média percorrida por aqueles que caminham até seus destinos a partir do TICEN.**



## Viagens da RMF para a Ilha de Santa Catarina: 2.456



**Comprimento médio das caminhadas: 790 metros**



**MUITO OBRIGADO!**

