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Welcome to/Croeso i

Level Design & Development

Multiplayer Map Design



Multiplayer Map Design

Lecture Contents

- ① Why Multiplayer Map Design is Different.**
- ② Core Principles of Map Design.**
- ③ Map Features.**
- ④ Common Map Design Mistakes.**
- ⑤ Map Creation Exercise.**



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Multiplayer Map Design

Why Multiplayer Map Design is Different.



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Why Multiplayer Map Design is Different

Multiplayer maps serve gameplay first.





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Why Multiplayer Map Design is Different

Example: Favela – Call of Duty





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Why Multiplayer Map Design is Different

- Fast-paced and close quarters battles.
- Built vertically with plenty of rooftops and two-story buildings.
- Accommodates different styles of play and game modes.





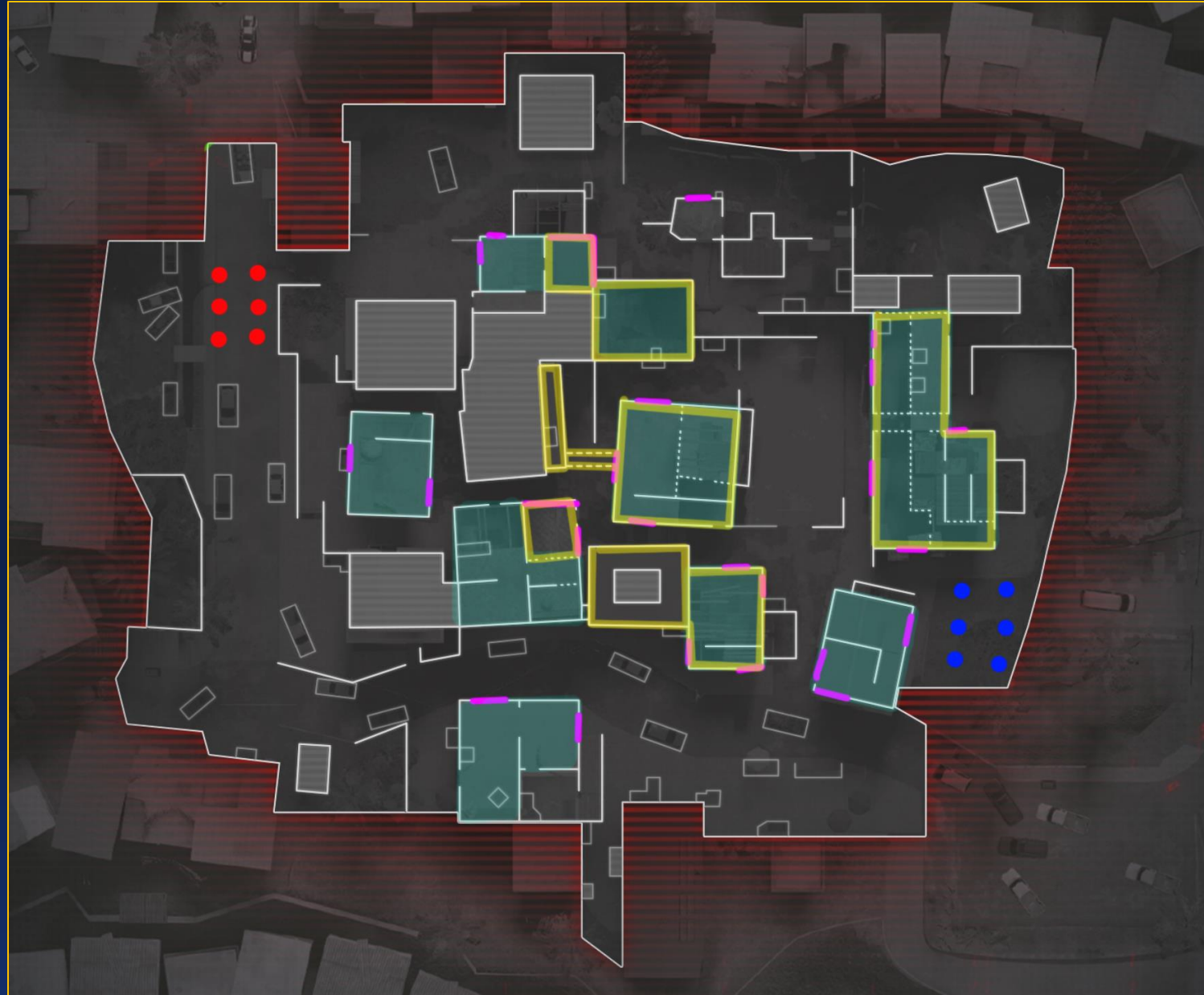
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Why Multiplayer Map Design is Different

Playstyles

- Long Range – Sniper Rifles
- Medium Range – Assault Rifles, LMGs
- Short Range – Shotguns, Pistols
- Melee Range – Riot Shield, Knife





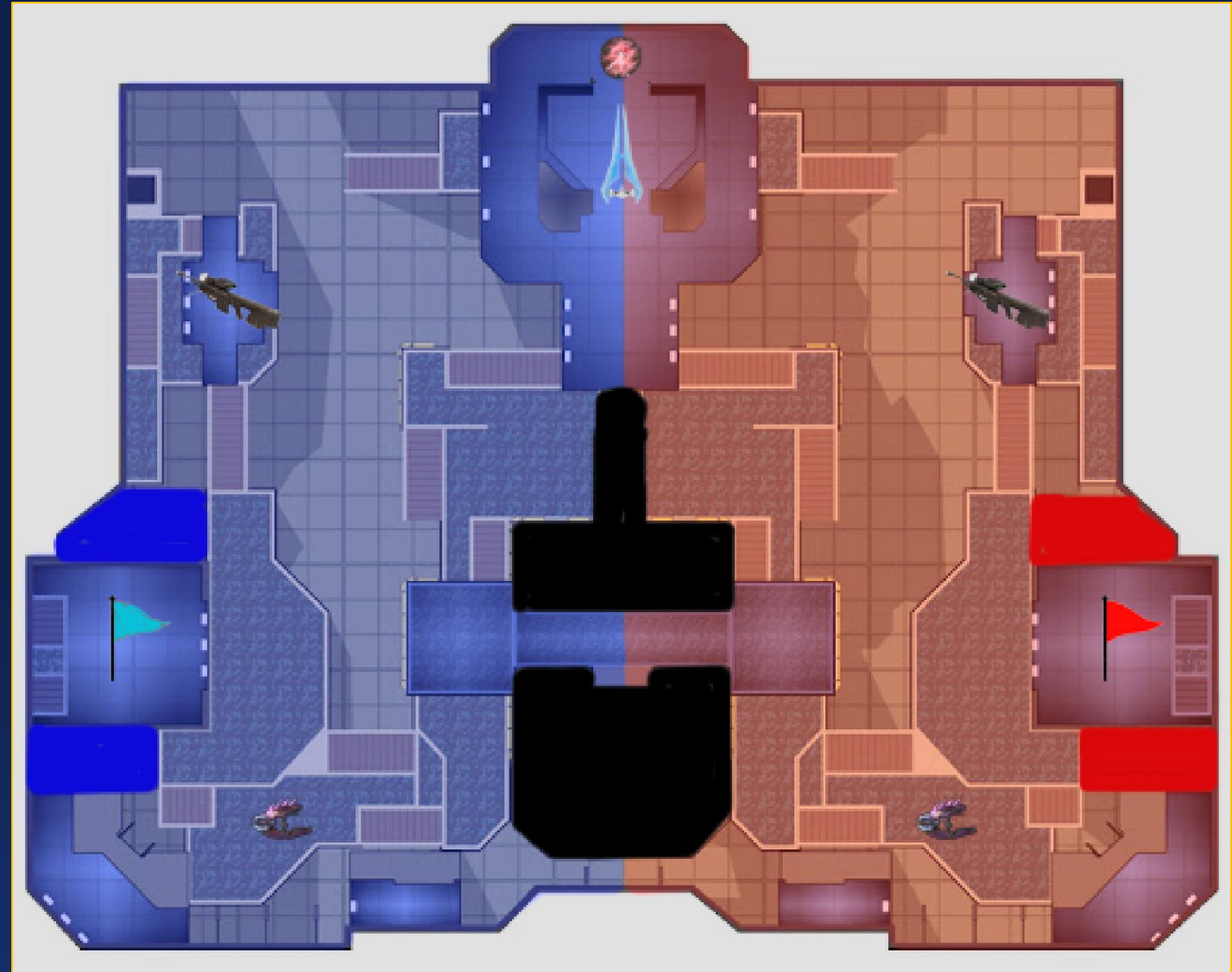
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Why Multiplayer Map Design is Different

Player Flow and Engagement

- Clear, readable layout
- Loop-based movement
- Multiple routes
- Strong central pull
- Smooth transitions between spaces





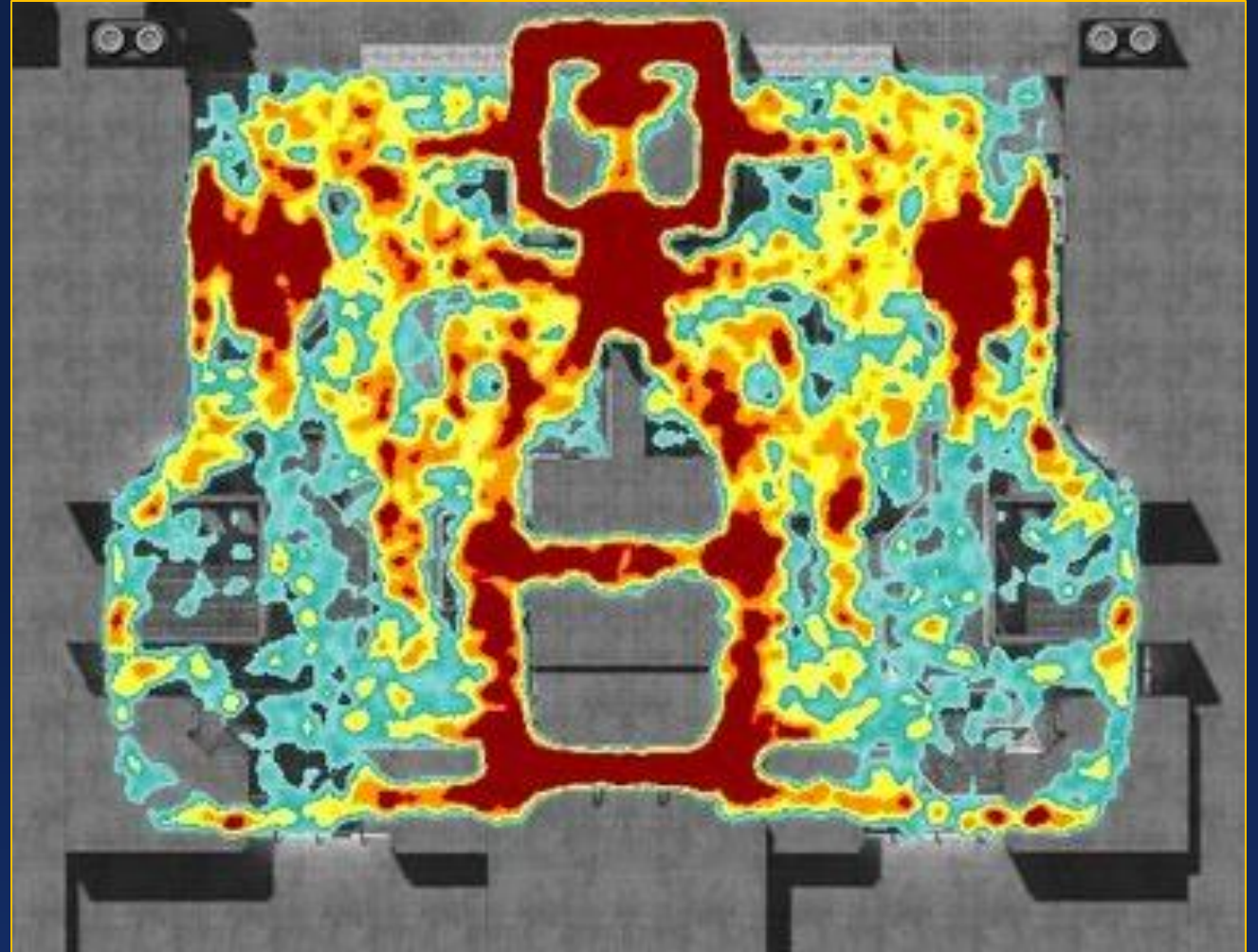
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Why Multiplayer Map Design is Different

Player Flow and Engagement

- Controlled sightlines
- Layered combat spaces
- Vertical engagements
- Risk vs reward placements
- Predictable but not repetitive fights





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Key Aspects of Multiplayer Map Design.



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Key Aspects of Multiplayer Map Design

Player flow – How Players move through the map.

Basic Flow Loop



Player Moves



Player Engagement



Player Repositions



Player Re-engages



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Key Aspects of Multiplayer Map Design

Map Foundation Examples.



Arena Loop
Halo - Guardian



Three-lane
Valorant - Icebox



Circular
Call of Duty - Rust



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Key Aspects of Multiplayer Map Design

Sightlines – Where players can see and shoot



Short sightlines



Medium sightlines



Long sightlines



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Key Aspects of Multiplayer Map Design

Verticality – Height Differences

- Tactical Advantage
- Movement Opportunities
- Varied Combat
- Creates Hotspots





Key Aspects of Multiplayer Map Design

Risk vs Reward

- Encourages decision making
- Creates map hotspots
- Prevents passive play
- Adds depth to gameplay





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Key Aspects of Multiplayer Map Design

Spawn Logic

- Poor spawns ruin maps
- Spawn safety
- Spawn Distance from combat
- Spawn flipping





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Map Features



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Map Features

Chokepoints

- Control Pacing
- Create Team Fights

Flanking Routes

- Prevent Stalemates
- Encourage Strategy





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Map Features

Landmarks

- Helps Navigation
- Creates Memorable Locations
- Improves Player Orientation





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Common Map Design Mistakes



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Common Map Design Mistakes

Sniper Dominance

- Long, uninterrupted views across the map.
- Limits close-quarters and mid range combat.
- Leads to frustrating, one-sided gameplay





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Common Map Design Mistakes

Dead Zones

- No objectives, rewards, or flow through them.
- Wasted space in the map.
- Breaks player movement and pacing





Common Map Design Mistakes

Too many routes

- Players struggle to learn and navigate.
- Encounters feel random rather than intentional.
- Reduces meaningful decision-making.





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Multiplayer Map Design

Map Creation Exercise.



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Multiplayer Map Design

Map Creation Exercise

Choose a game: Call of Duty, Halo, Valorant, Gears of War or Battlefield.

Create a new top-down map layout, that includes:

- Player flow (routes + arrows)
- Spawns
- Chokepoint + flanking route
- Vertical elements
- Power weapon (if eligible)/ objective

Add reference images (landmarks + environment) around the map.

Create an asset list

Give your map a name

Define a clear theme (desert, industrial, space).

Upload the photoshop file to the Moodle tab "Multiplayer Map Design Submission"



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Map Creation Exercise

Rust – Call of Duty

Theme: Desert/Industrial

Core Structures: Central tower, large pipes

Cover Objects: Oil Barrels, crates, sandbags

Verticality Elements: Ladder, Stairs

Environment/Set dressing: Oil rig machinery, wiring/cables, warning signs

Terrain & Ground: Sand/desert ground, Rocks and debris

Boundaries: Perimeter fence, Barriers

Lighting: Harsh sunlight, Industrial lights

