# Midterm Report and Presentation:
# Smart City Technologies and Their Impacts

## Instruction

This is a group assignment (equivalent to the midterm exam). You are required to submit a report and deliver a presentation in the classroom.

Smart cities rely on various emerging technologies as key components. These technologies, such as autonomous vehicles, urban air mobility, and building energy systems, are poised to enter the market and transform our urban environments and daily lives. For this assignment, you will study one of these technologies from the provided table below. The contents of your report and presentation may cover:

(1) What it is (overview, definitions, background, etc.);

(2) Current research/industry trends (where we are now, expected future, hot issues/topics);

(3) Impacts on urban, transportation, infrastructure, or communication systems;

(4) Implications for smart city planning and operation;

(5) The anticipated changes it will bring to our daily lives;

(6) How it is connected with your research (or what you want to do related to it);

(7) References for anything you cite (articles, websites, journal papers, reports, etc.).

## Deliverables

1. **A file of Word document** (report): [#]_[topic]_[team#].docx (or .doc) [50%]
2. **A file of PowerPoint slides**: [#]_[topic]_[team#].pptx (or .ppt) [30%]
3. **15+ min presentation** (+5min Q&A) for each team [20%]

* The length of the report is up to you, but perhaps it would range 15-20 pages with cover/figures/tables/references (no strict lower/upper limits of the length)
* All team members should participate in the presentation
* Percent denotes grading composition for the midterm exam
* Submit your files via LMS.

## Due date

- Upload your **report** (#1 docx) by **11:59PM 4/27 (Sat)**
- Upload your **ppt file** (#2 pptx) by **11:59PM 4/27 (Sat)**
- **Present** your work in the classroom (see the date below)

## Topics and tentative schedule for presentation

| Group | Theme | Topic | Student1 | Student2 | Date |
|---|---|---|---|---|---|
| 1 | Architecture, building, and construction | AI in architecture design | Nguyen Phan Khanh Huyen (원판칸형) | 김우재 | 5/2(Mon) |
| 2 | | Automation in construction | Nguyen Anh Tuan (원 안 뚜언) | NGUYEN THI LAN ANH (원티란안) | |
| 3 | | Building Information Modeling (BIM) | Tran Thai Bao (짠태보) | 조성오 | |
| 4 | | Carbon emission & building energy system | HSU TU UY (허쯔위) | Huynh Thi Ngoc Yen (황티억연) | |
| 5 | Transportation part1 | Public transit | 김기현 | 정의현 | 5/9(Mon) |
| 6 | | Demand responsive transit (DRT) | 민유성 | 육영진 | |
| 7 | | Micromobility (e-scooter, bikeshare) | 김홍재 | 채경수 | |
| 8 | Transportation part 2 | Autonomous vehicles | 구예서 | 김호재 | 5/16(Mon) |
| 9 | | Connected vehicles | 박근휘 | 김승환 | |
| 10 | | Safety in transportation | 박누리 | 이성준 | |
| 11 | | Bigdata in transportation | 정정호 | 송용욱 | |
| 12 | Urban, logistics, and IoT | Urban design in smart cities | Nguyen The Hung (원테흥) | 김종명 | 5/23(Mon) |
| 13 | | Smart logistics | 전건우 | 김우원 | |
| 14 | | IoT, ICT, and smart sensor/camera | Malik Usama (말릭 우사마) | Saif ullah (사이프 울라) | |

## Tips

- If you look for academic papers, use Google Scholar, Scopus, Web of Science, etc.
- Many consulting firms (such as McKinsey & Company, Boston Consulting Group, Deloitte Consulting, etc.) have published a number of reports
- Other journals (e.g. the Economist, Wall Street Journal, the New York Times) or government documents could be useful as well
- But, in general, Googling (either in English or Korean) will help you a lot
- Start your preparation “now” or ASAP (be mindful of the tentative timeline of the course)

* There could be a pop-up quiz on each day, so pay attention to presentations.