Connected Mobility Seminar (IN2107)

29.1.2020

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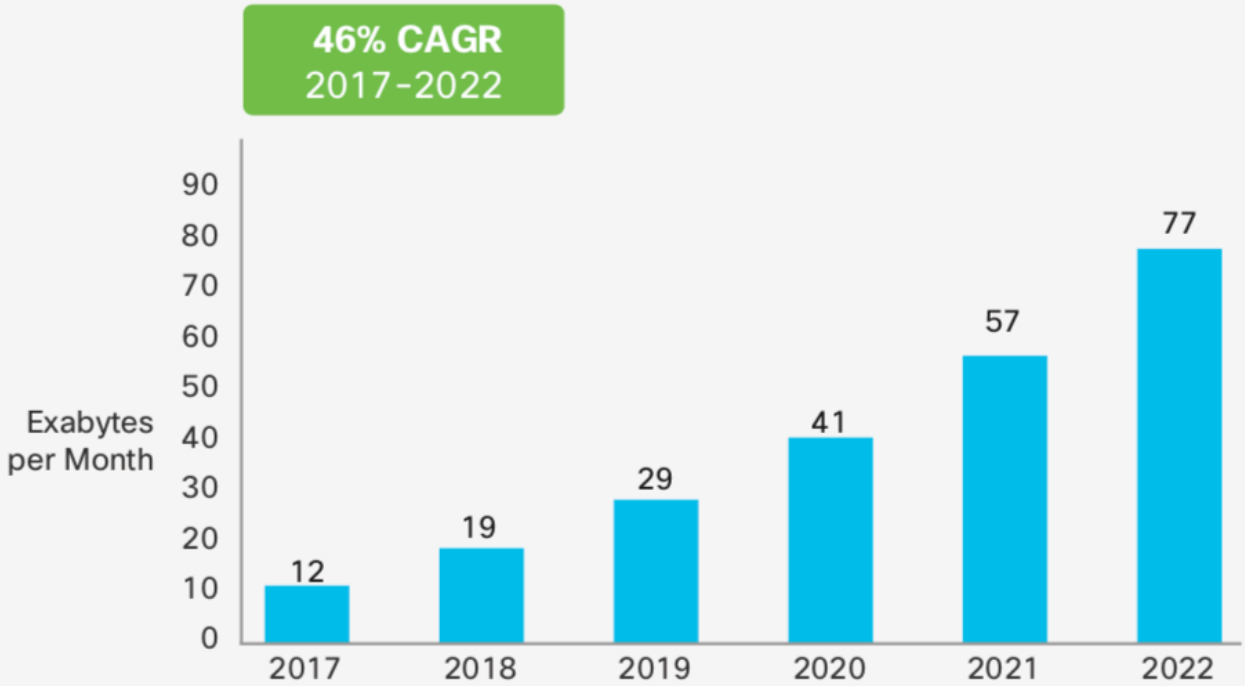
Chair of Connected Mobility

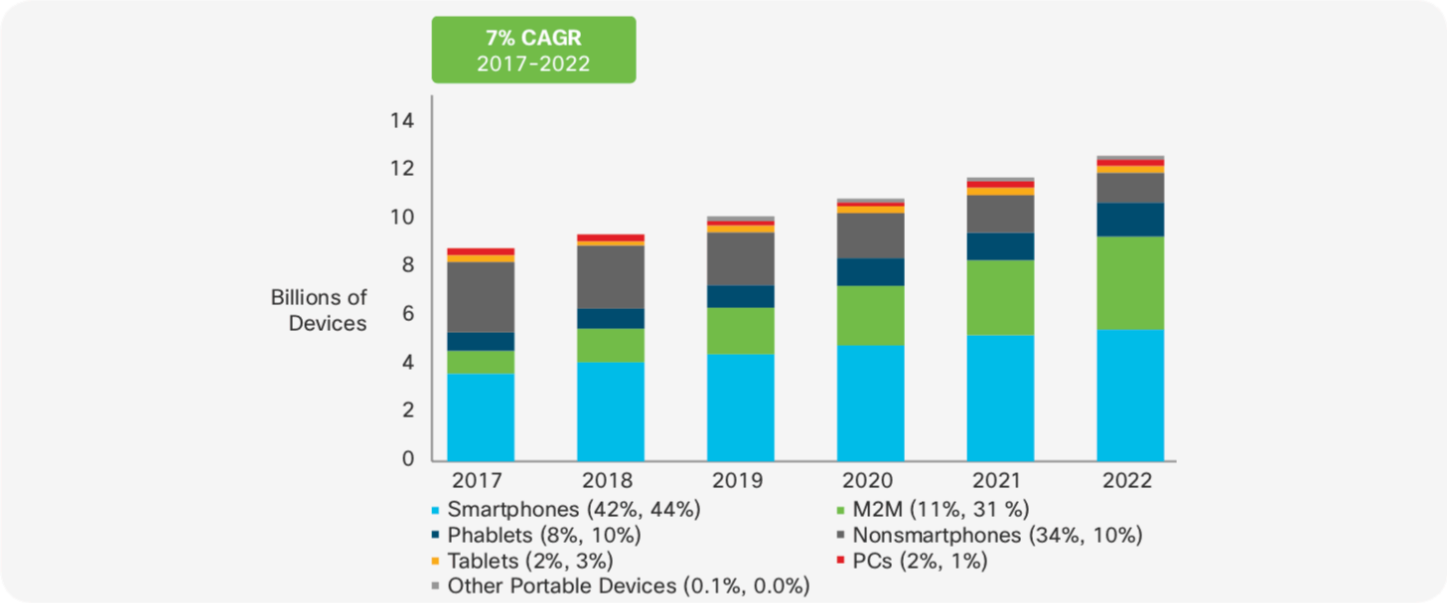
Overall Mobile Data Traffic

Figure 2. Cisco Forecasts 77 Exabytes per Month of Mobile Data Traffic by 2022



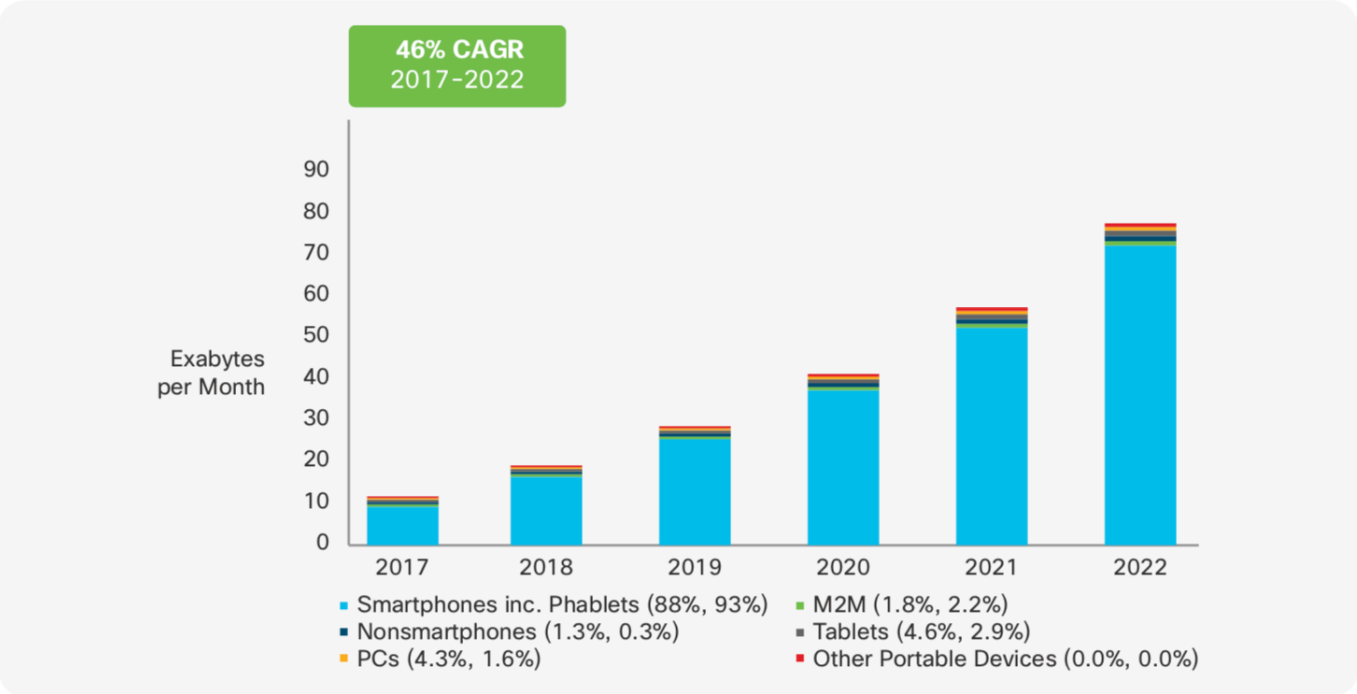
Source: Cisco VNI Mobile, 2019

Figure 4. Global Mobile Devices and Connections Growth



Note: Figures in parentheses refer to 2017, 2022 device share.
Source: Cisco VNI Mobile, 2019.

Figure 5. Global Mobile Traffic Growth by Device Type



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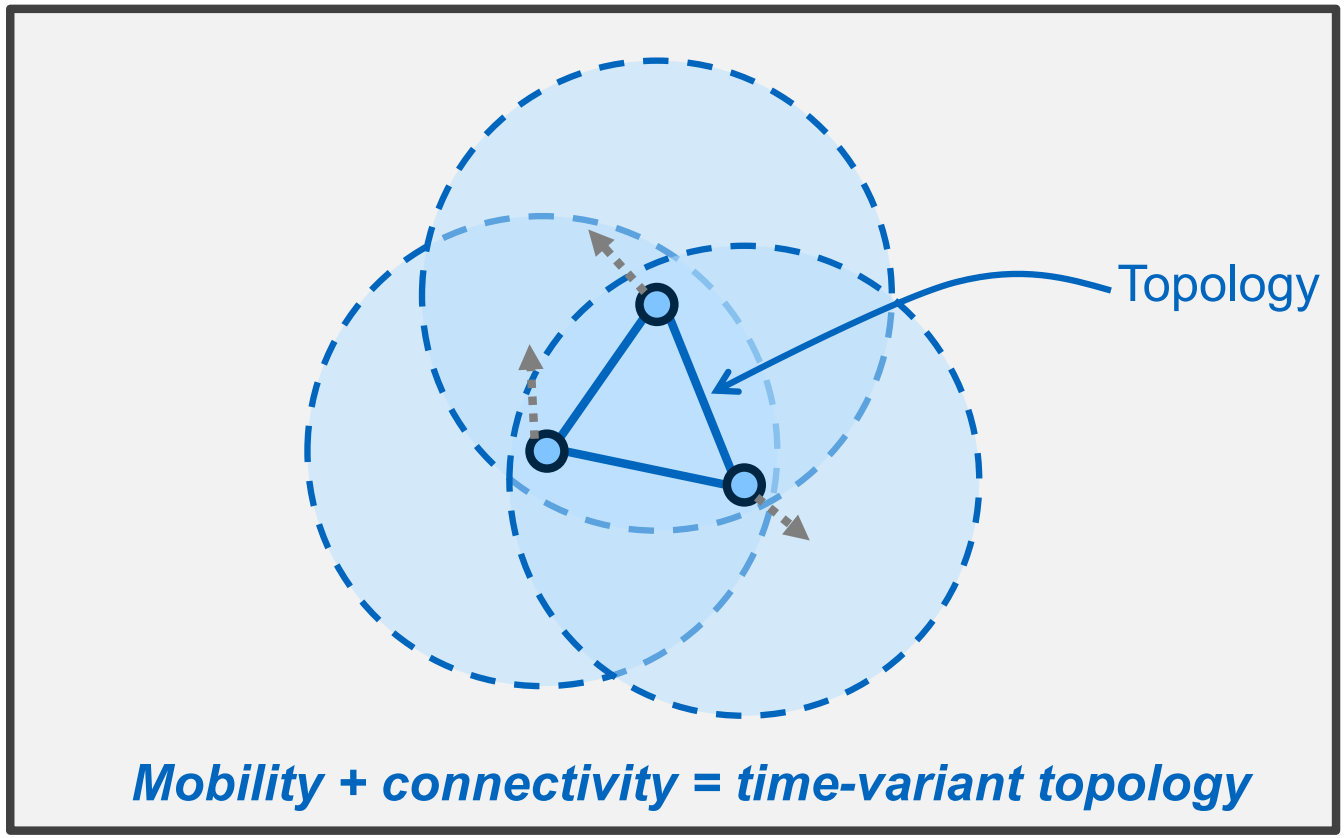
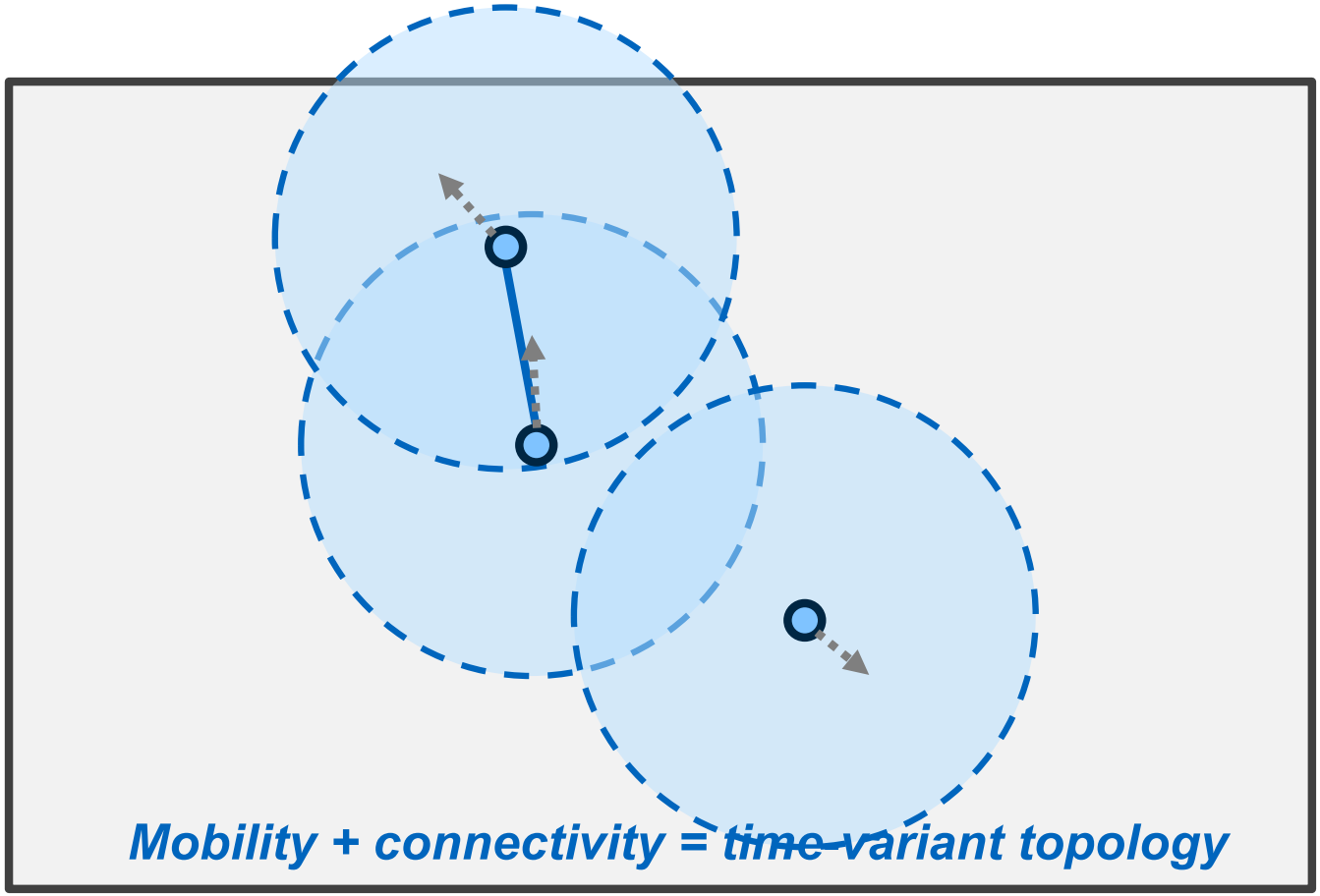
Source: Cisco VNI Mobile, 2019.

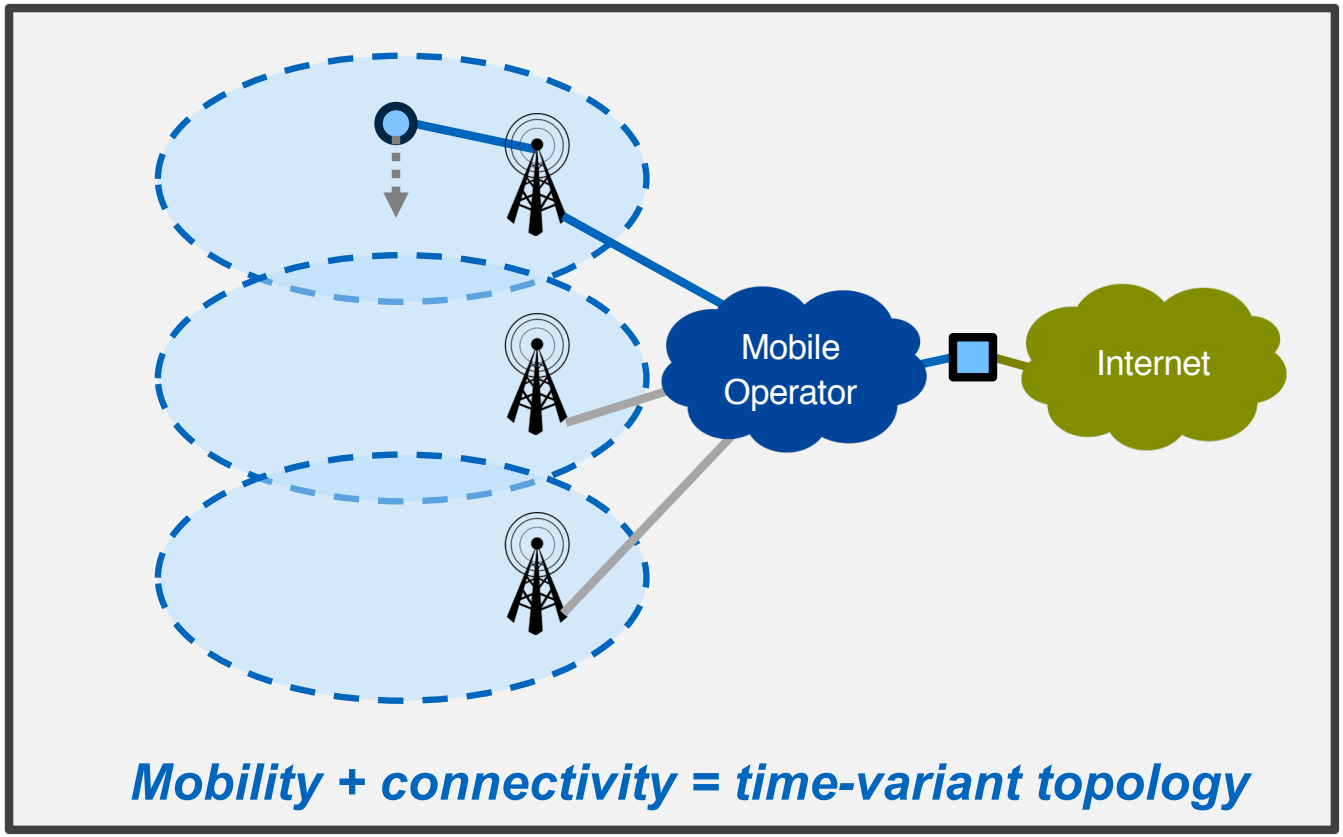
Connected Mobility



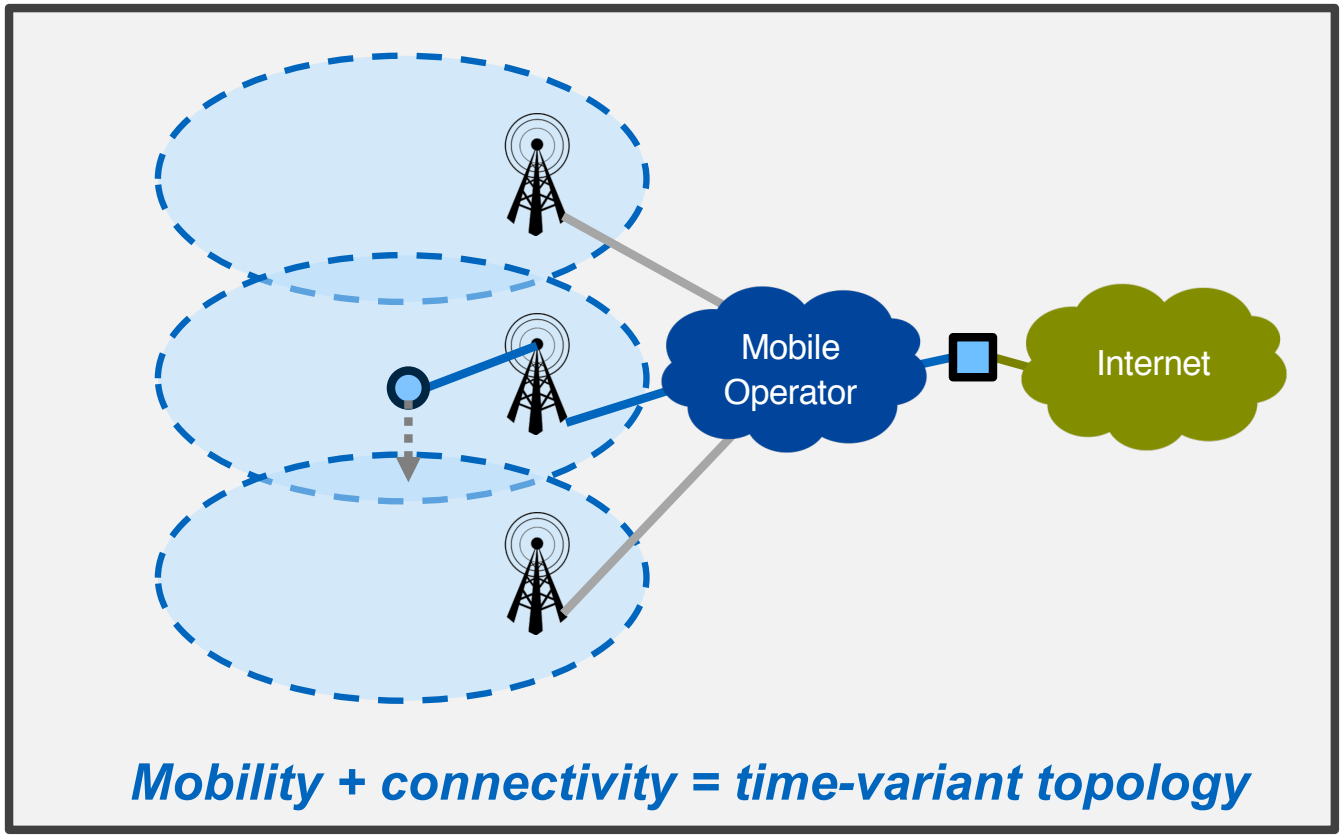
Connected Mobility



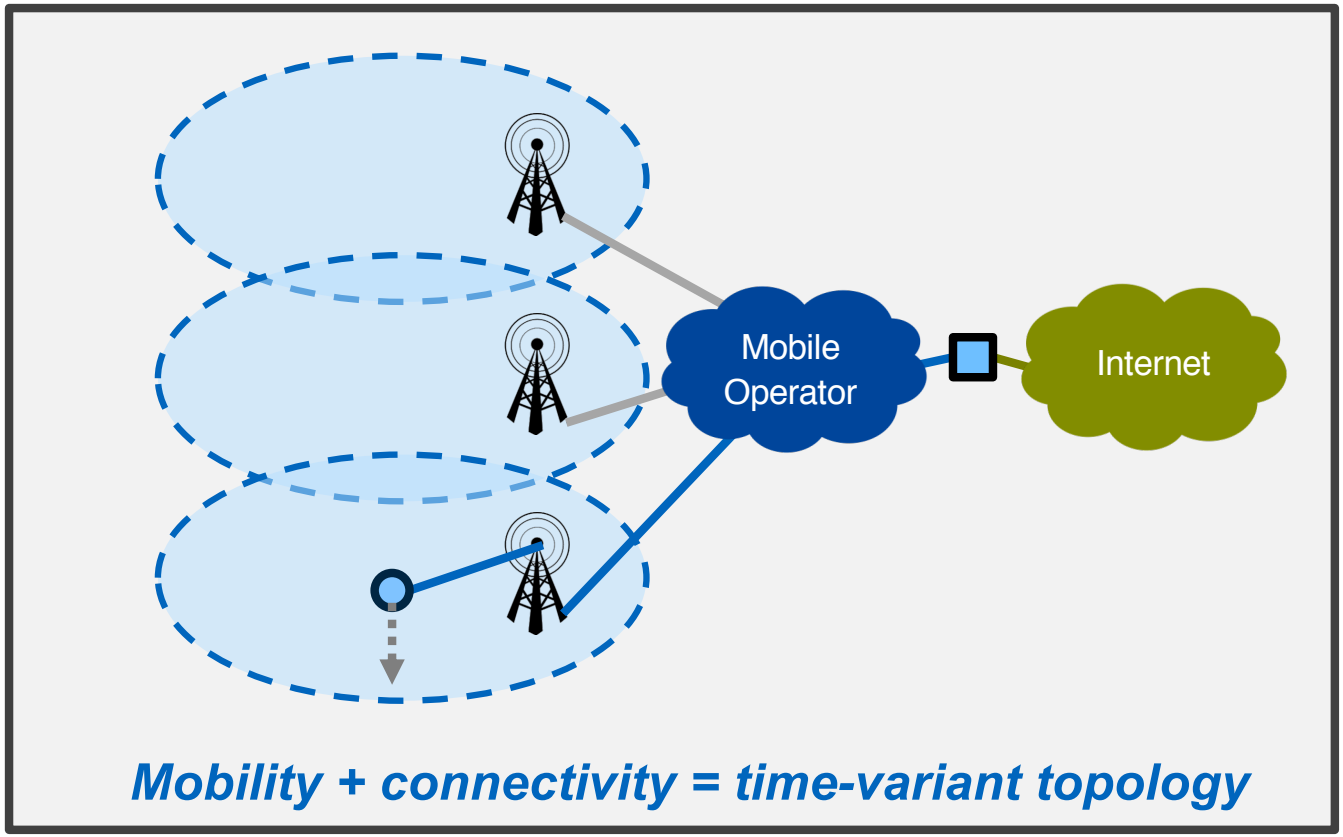
Connected Mobility



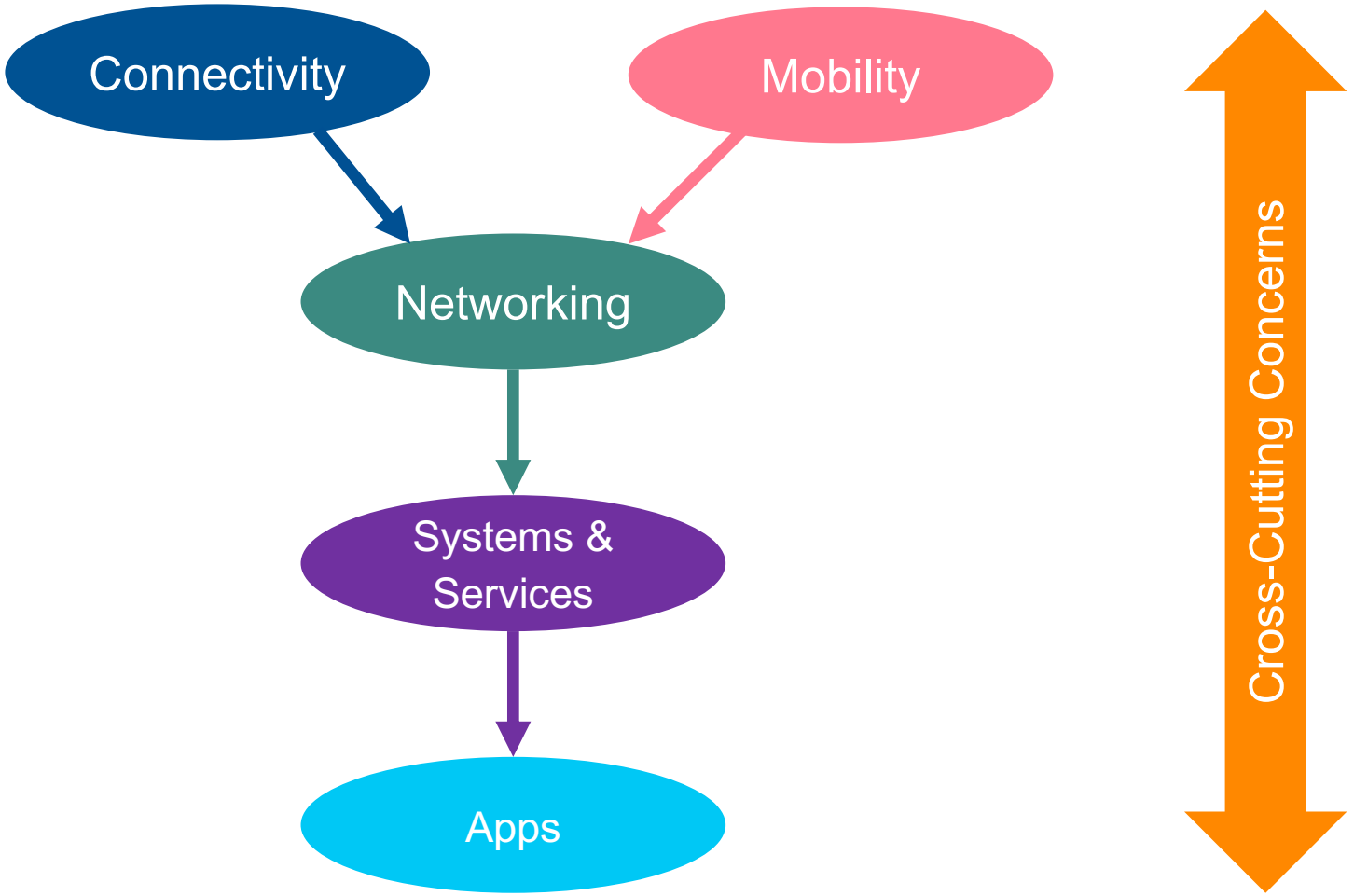
Connected Mobility



Connected Mobility



Topic Structure



Covered Topics

- Covers the full range of topics in Connected Mobility:
  - "Connected" = protocol stack from wireless links to apps.
  - "Mobility" = measuring, characterizing and modeling how humans (and other things) move.
- Overview
  - Mobile systems and mobile connectivity concepts
  - Connected mobile systems & networks
  - Mobility models
  - Mobile networking and connectivity models
  - Mobile transport and application support
  - Mobile offloading
  - Mobile measurements
  - Security and privacy – and ethics
  - Mobile service infrastructures
  - Case studies: location-based services

Practicalities

Requirements to take the course

- Bachelor's degree in computer science or a related field.
- Basic background in communications and networking technologies.
  - Variety of topics allows for varied technical backgrounds.
- Ability to write and present in English.

Requirements to complete the course

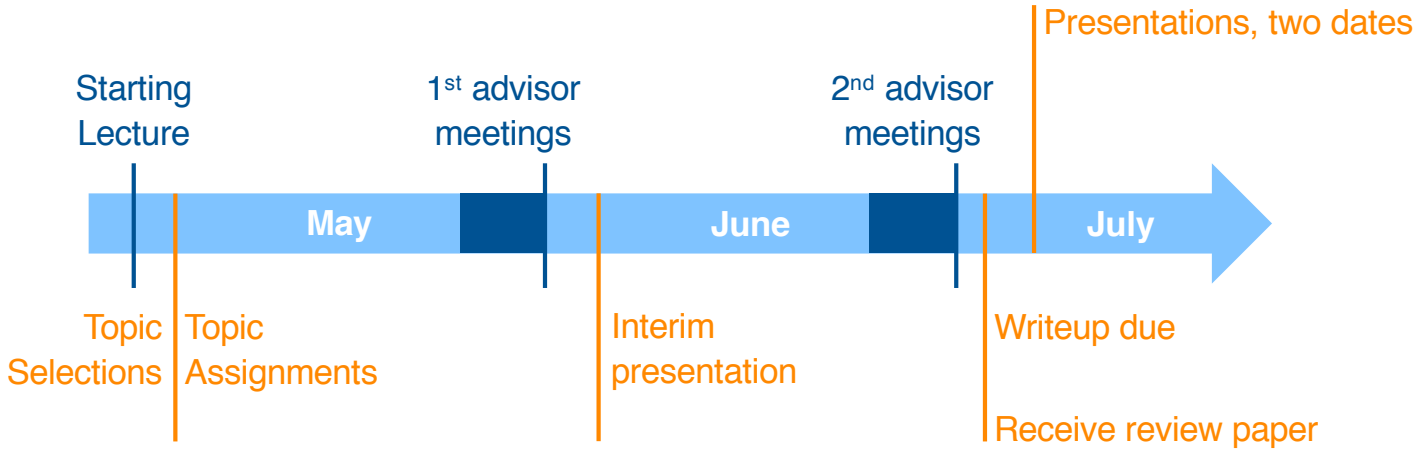
- Written paper, 7-9 pages in English using ACM sig template.
- Presentation of the paper in English (~30 min).
- Reviewing the paper and acting as an opponent to another student.

Practicalities

Course structure

- Registration with the Matching System of the department. (7.2.-12.2.)
  - Emailing a letter of motivation (kaerkkae@in.tum.de) may increase your chances
- Further information from the course staff to the matched students, e.g., dates, times and locations of meetings. (20.2.-11.3.)
- Starting lecture introducing the topic areas.
- Topic selection process and final topic assignments.
- One-on-one meetings with advisors.
- Paper submission.
- Reviewing another student's paper.
- Presenting the paper, acting as an opponent to another presentation.

Organization



Requirements to complete the course:

- Written paper, 7-9 pages in English using ACM sig template.
  - Cover the base material.
  - Create a *synthesis* of the topic—ties the papers together into a whole.
- Attendance of two advisor meetings.
- Presentation of the work in English (interim 15 min, final 30 min).
- Reviewing the paper and acting as an opponent to another student.