Dario Rodighiero

Representing Scientific Communities

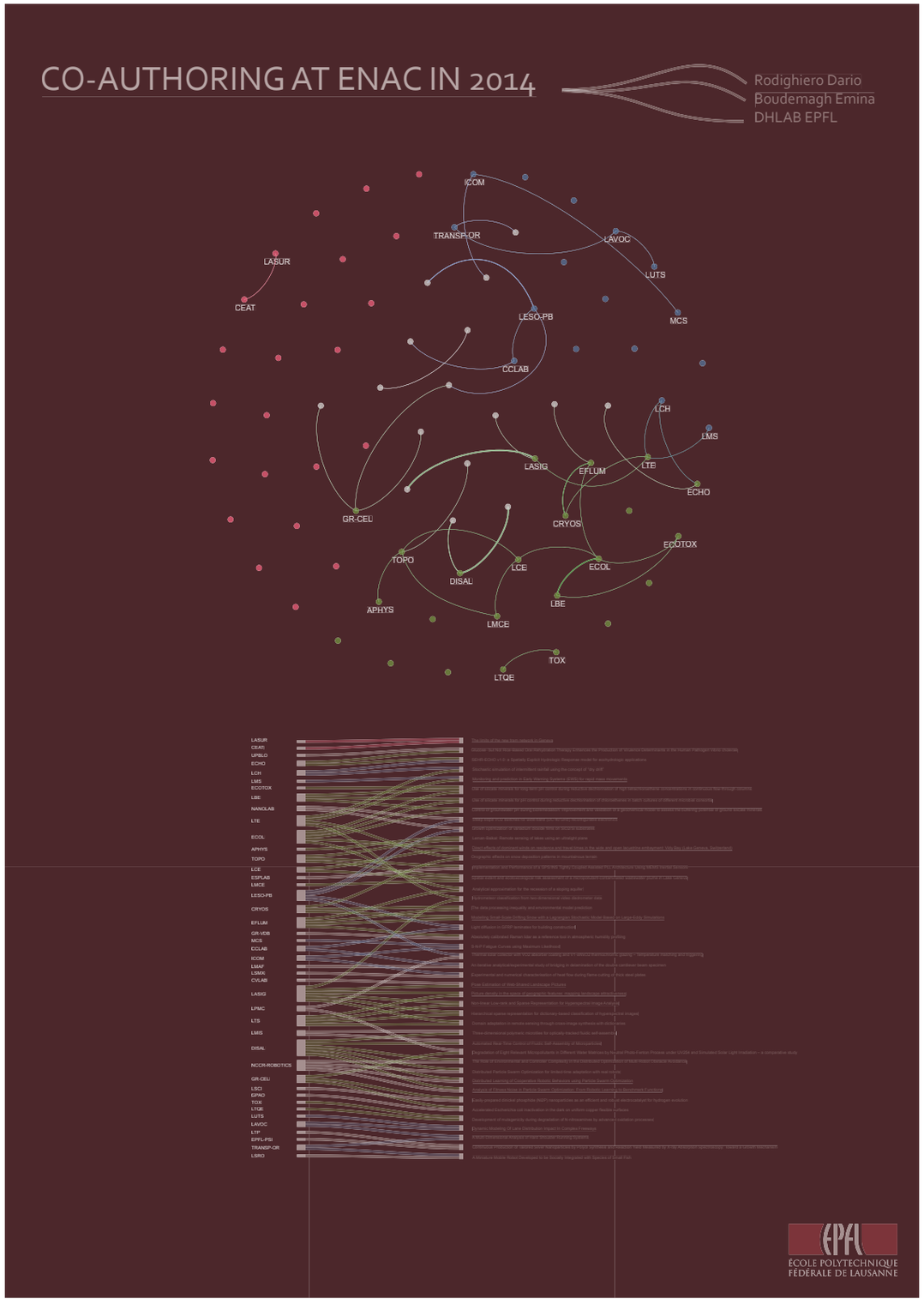
Second Lecture – Design Applied

CERN, Geneva 15 March 2016

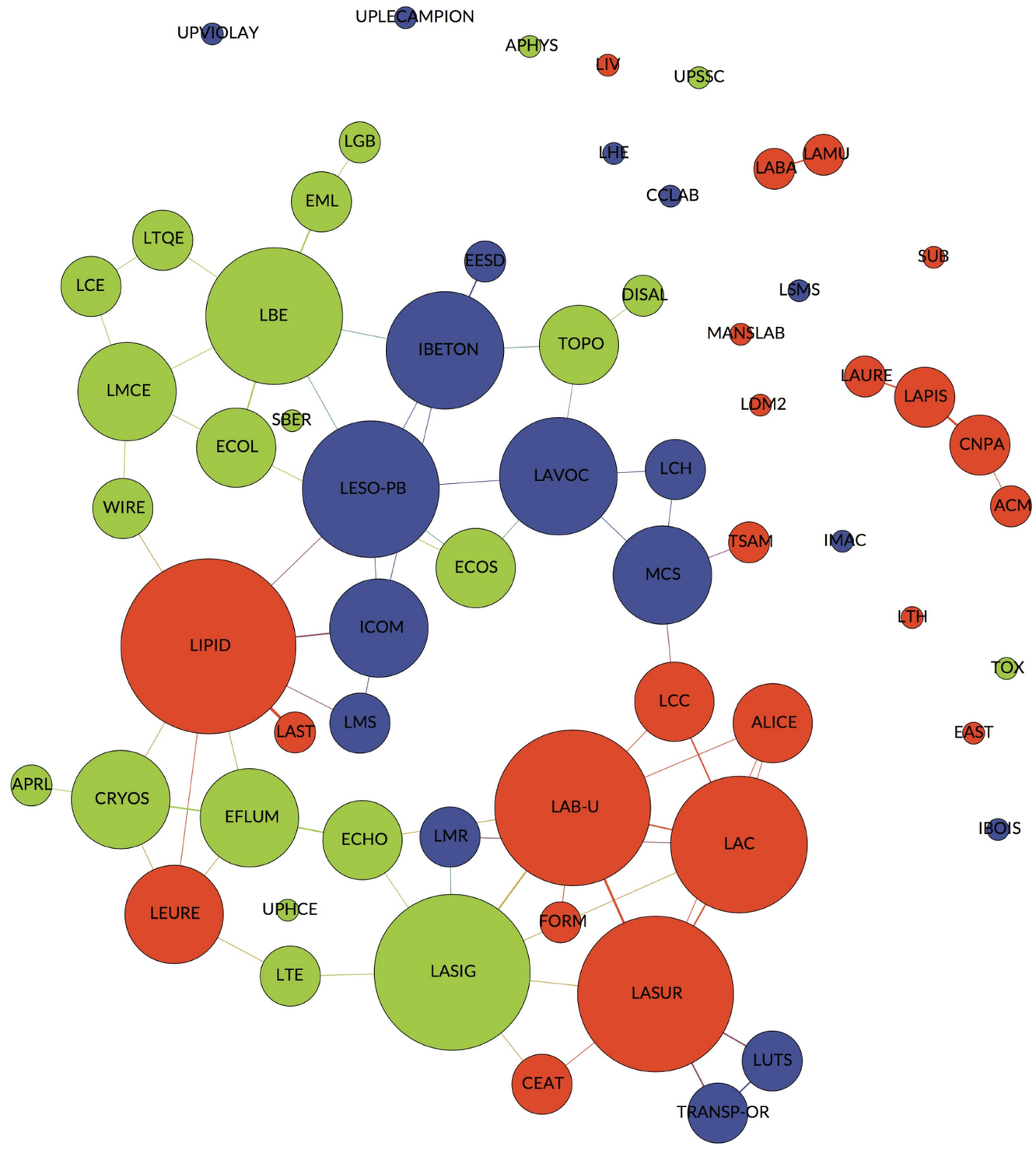
Today

- Concept I – Networks
- Concept II – Scale and filters
- Concept III — Trajectories
- Concept IV — Distant View
- Concept V — Utopia of the perfect network
- Concept VI — Pyramid
- Concept VII — Appropriation
- Concept VIII — Materiality
- Current Design

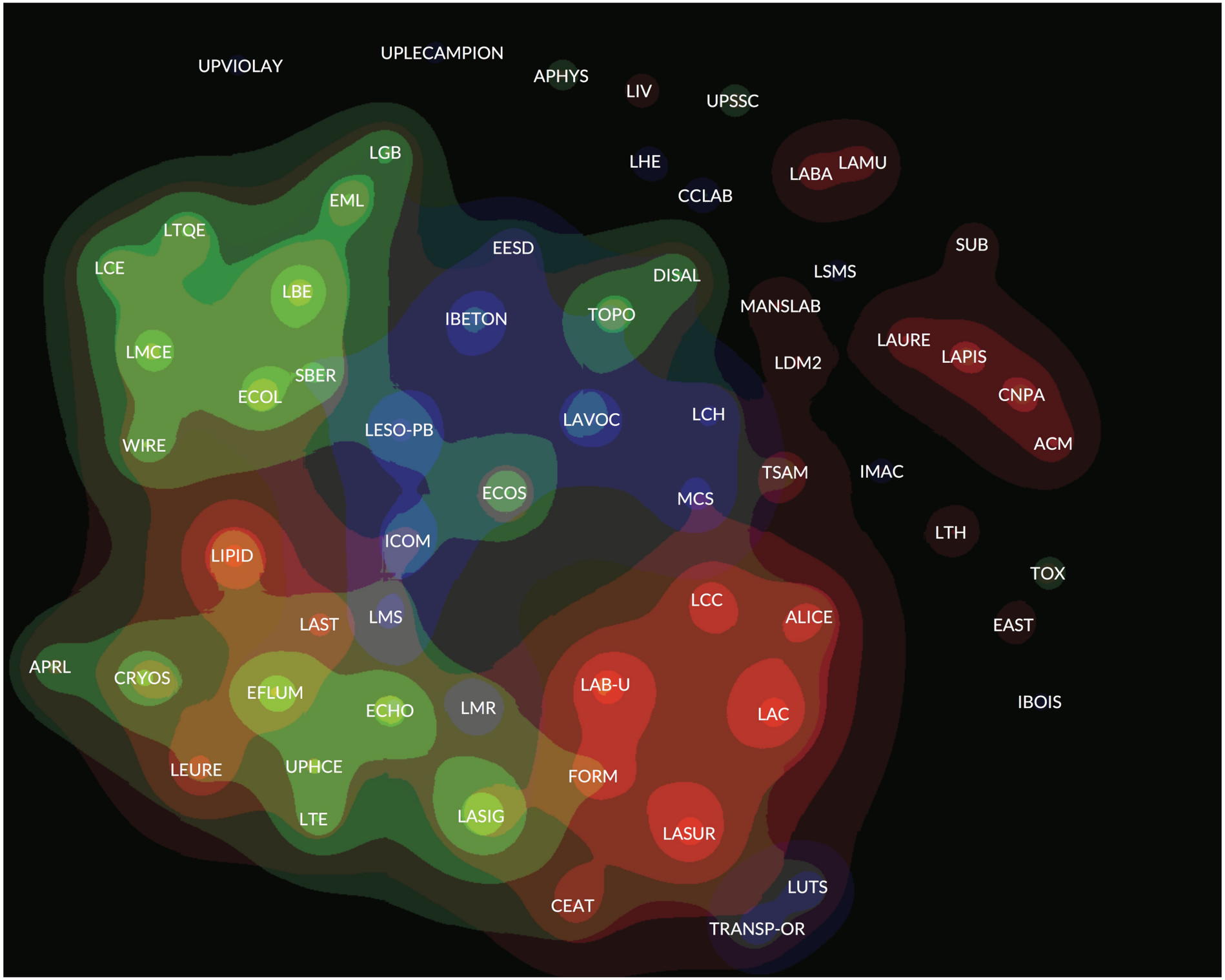
Concept I – Networks



ENAC co-publications 2014 – Emina Boudemagh and Dario Rodighiero

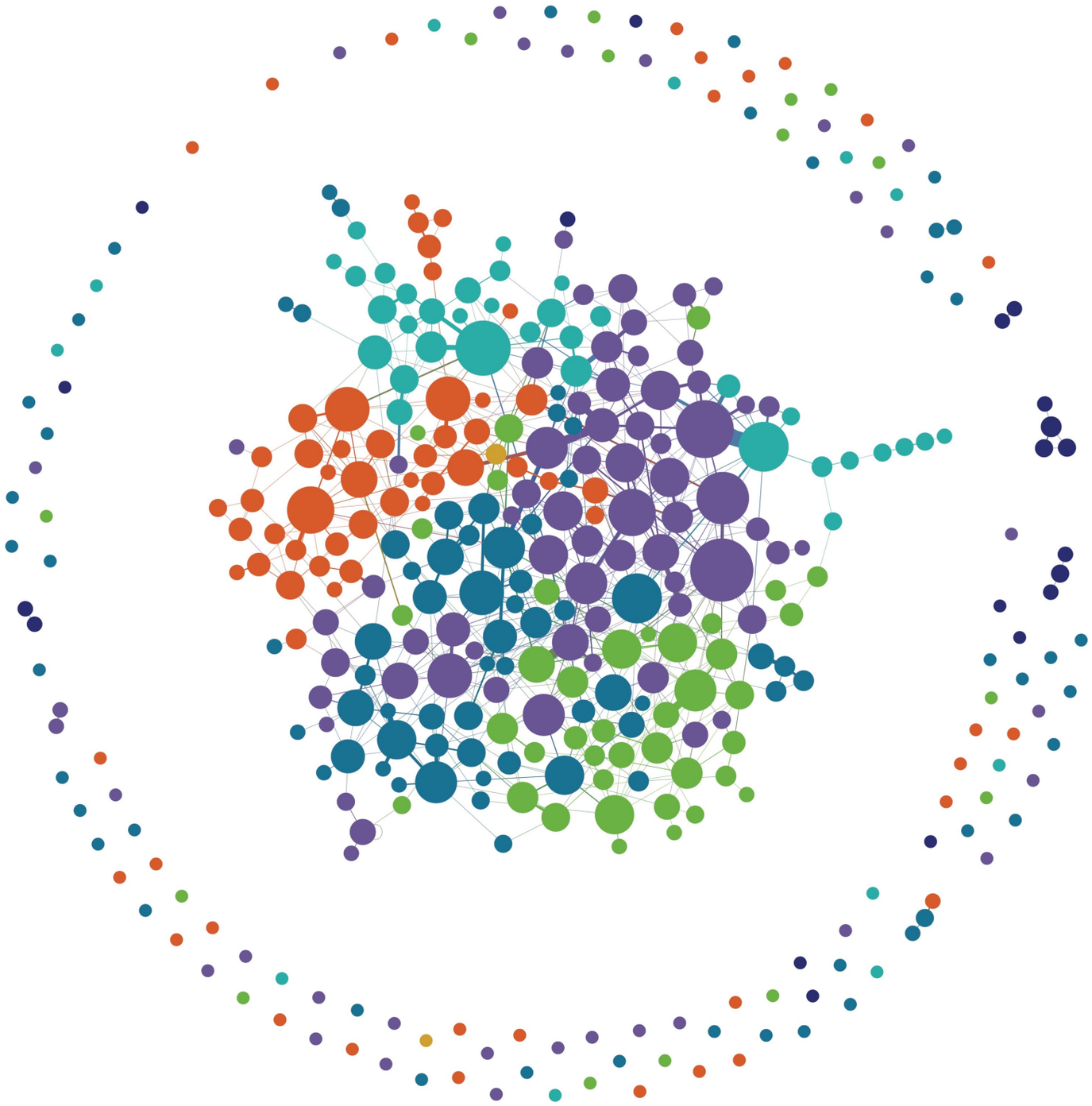


2014 ENAC Publications

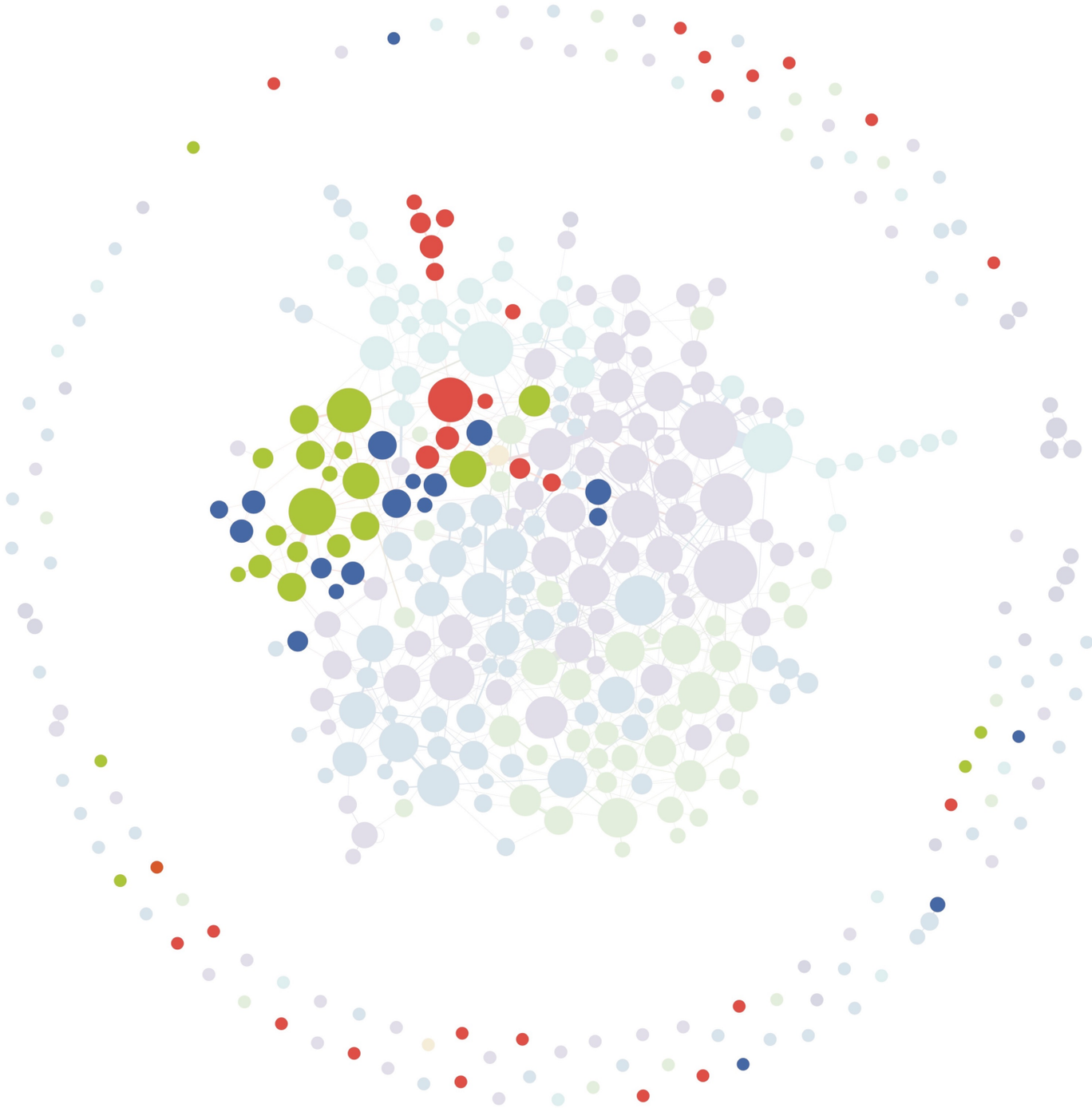


2014 ENAC Publications by Hectograph by médialab of Sciences Po

Concept II – Scale and filters

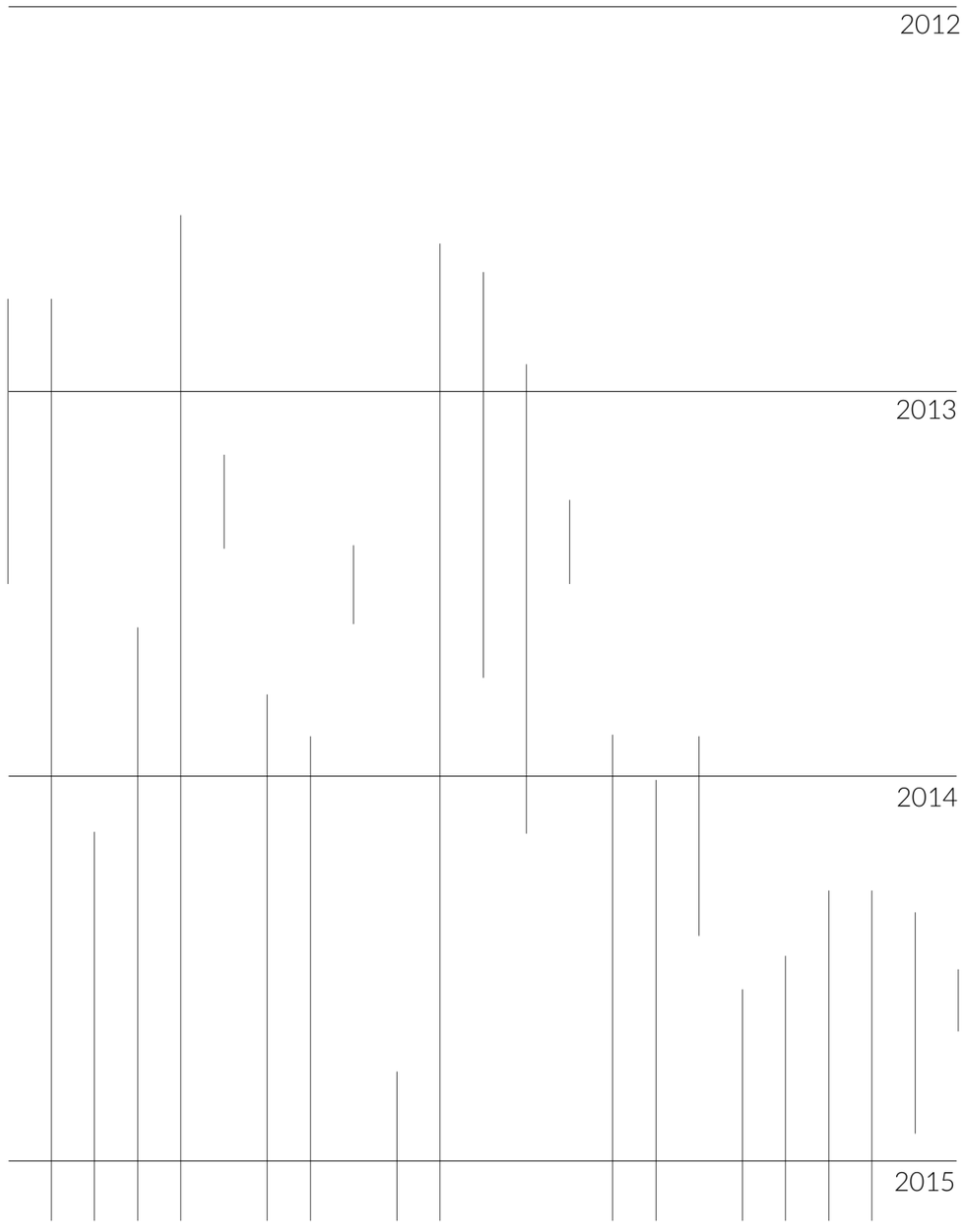


EPFL laboratories arranged by common publications in 2014

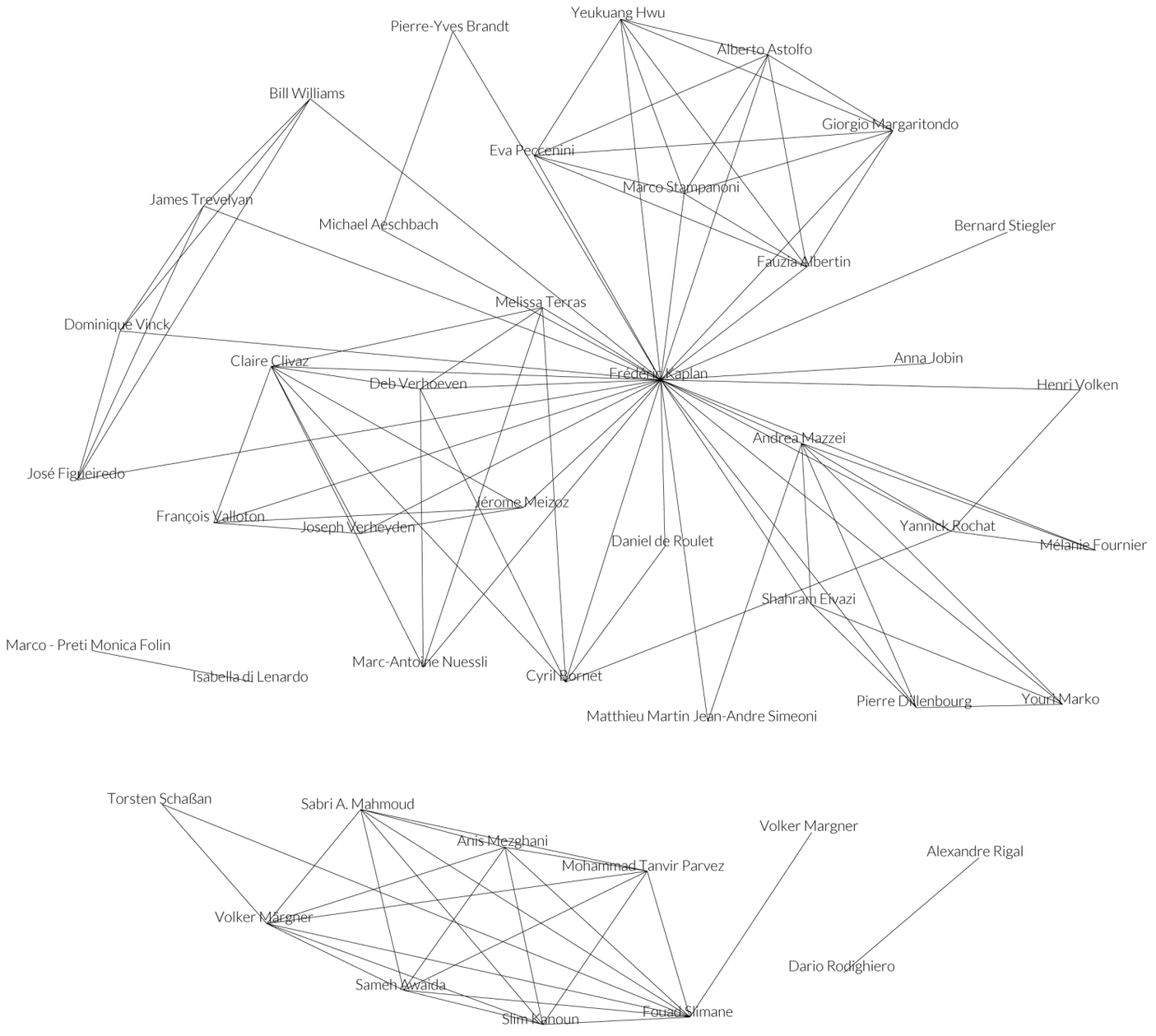


ENAC laboratories in the EPFL context

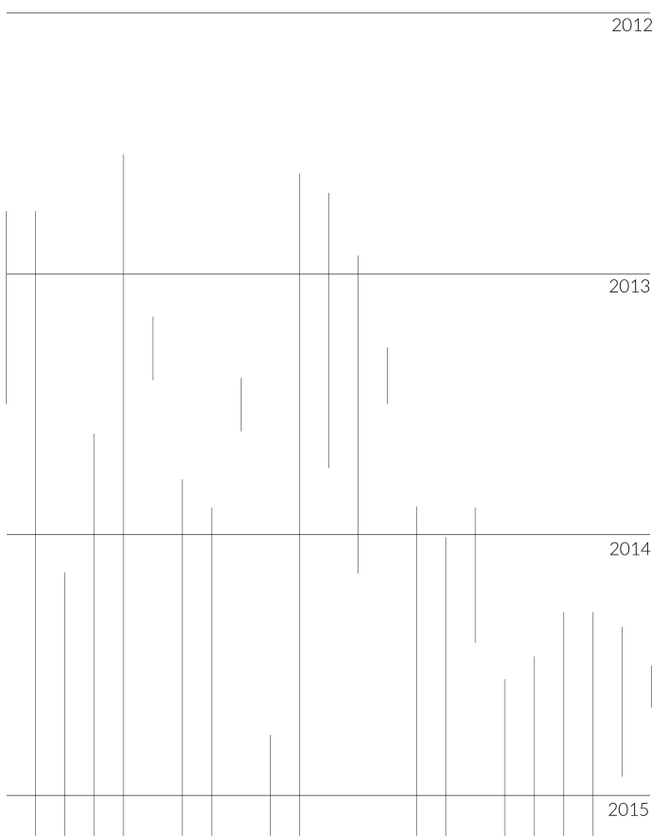
Concept III — Trajectories

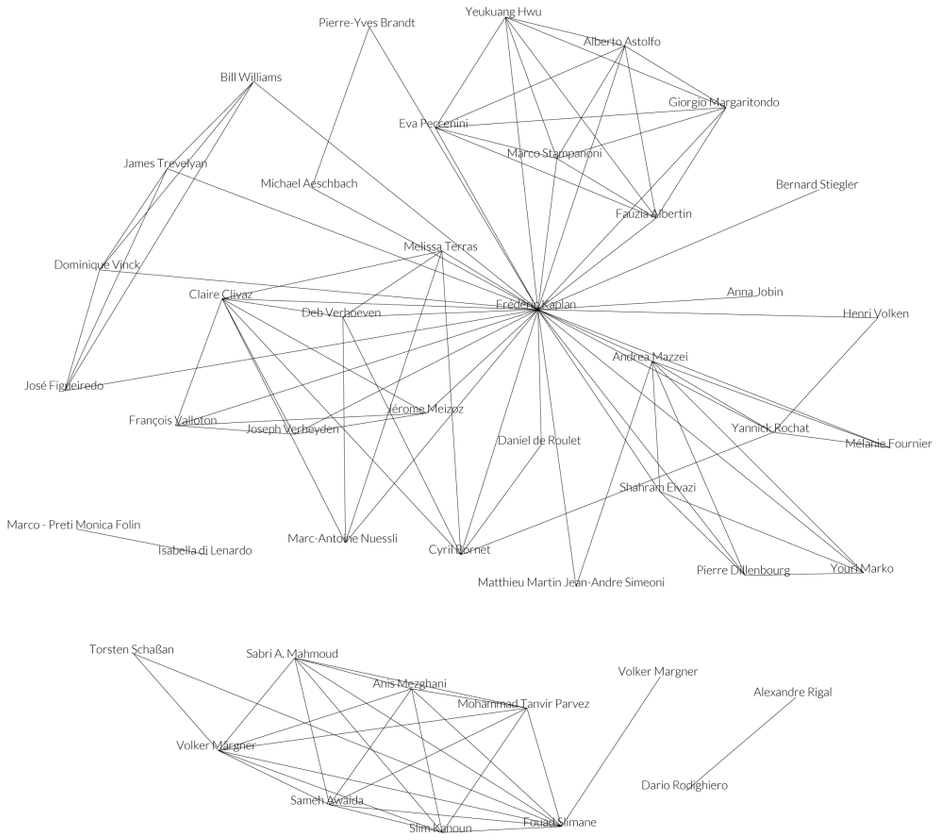


Timeline of DHLAB

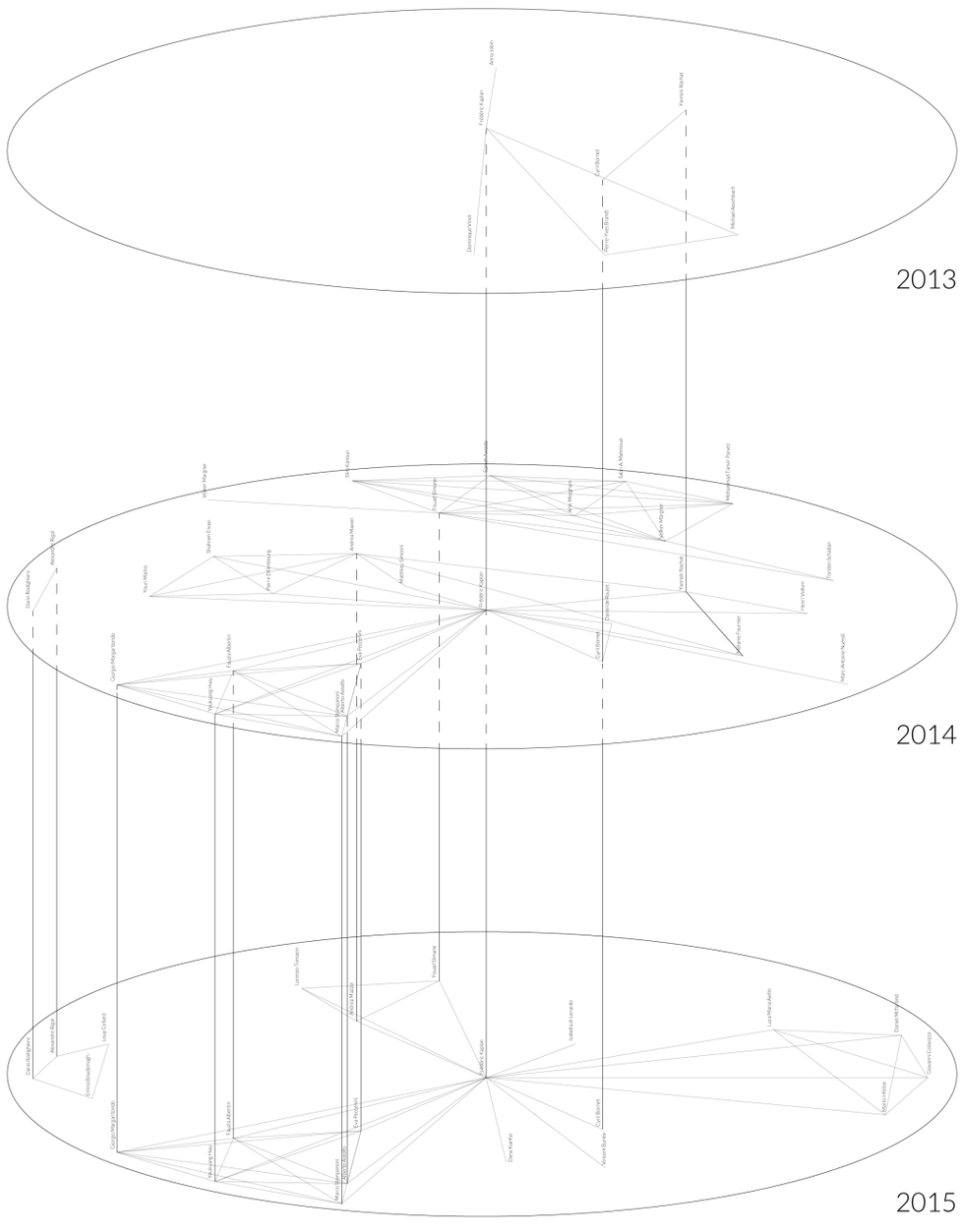


Network of DHLAB

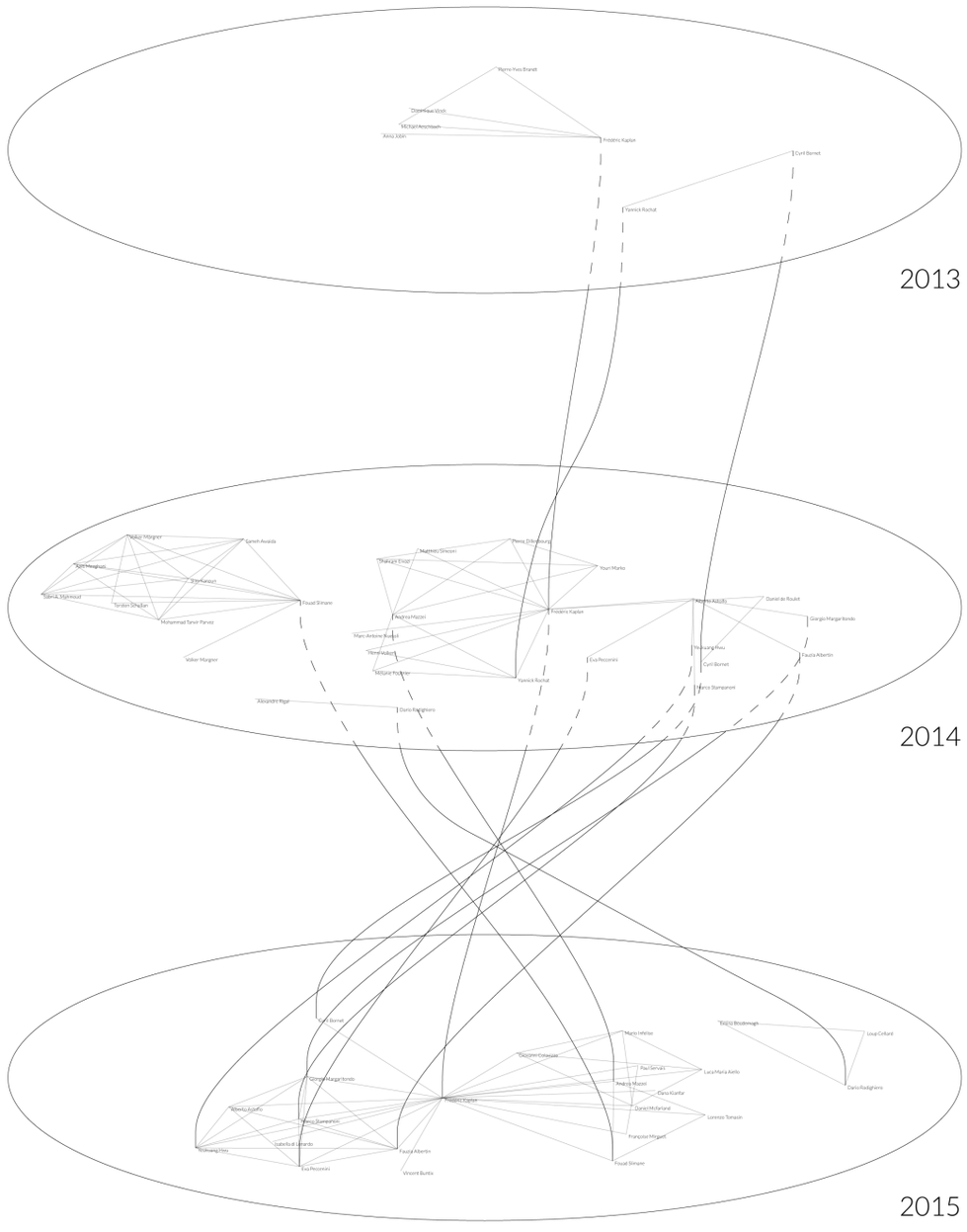




Timeline and Network of collaborations inside the DHLAB

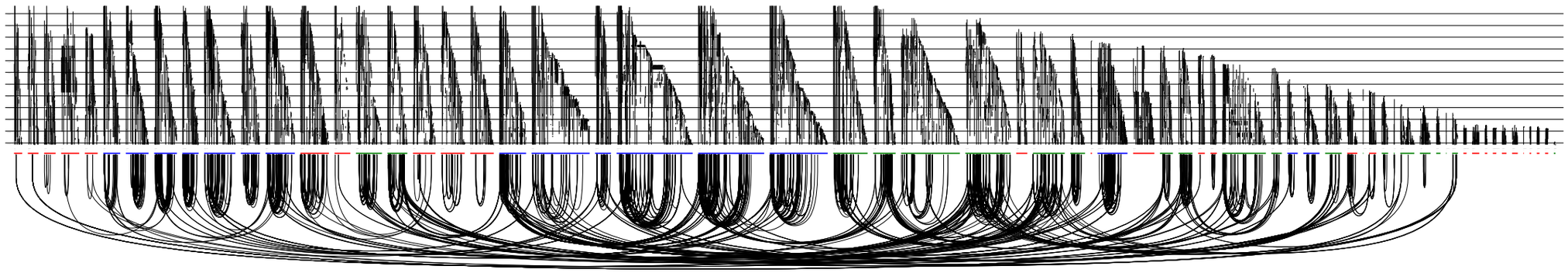


First try of the trajectory tool representing the DHLAB

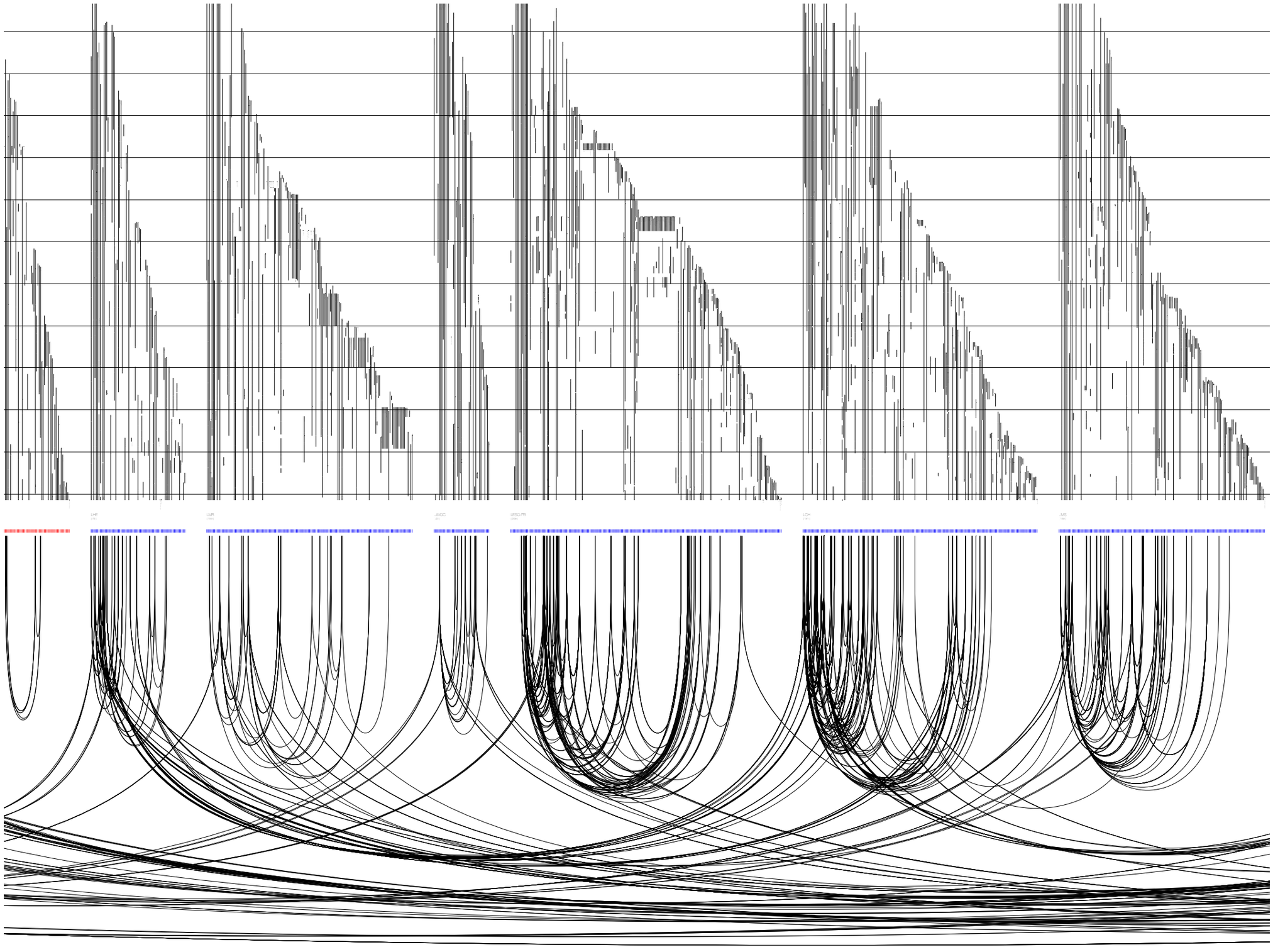


Second try of the trajectory tool representing the DHLAB

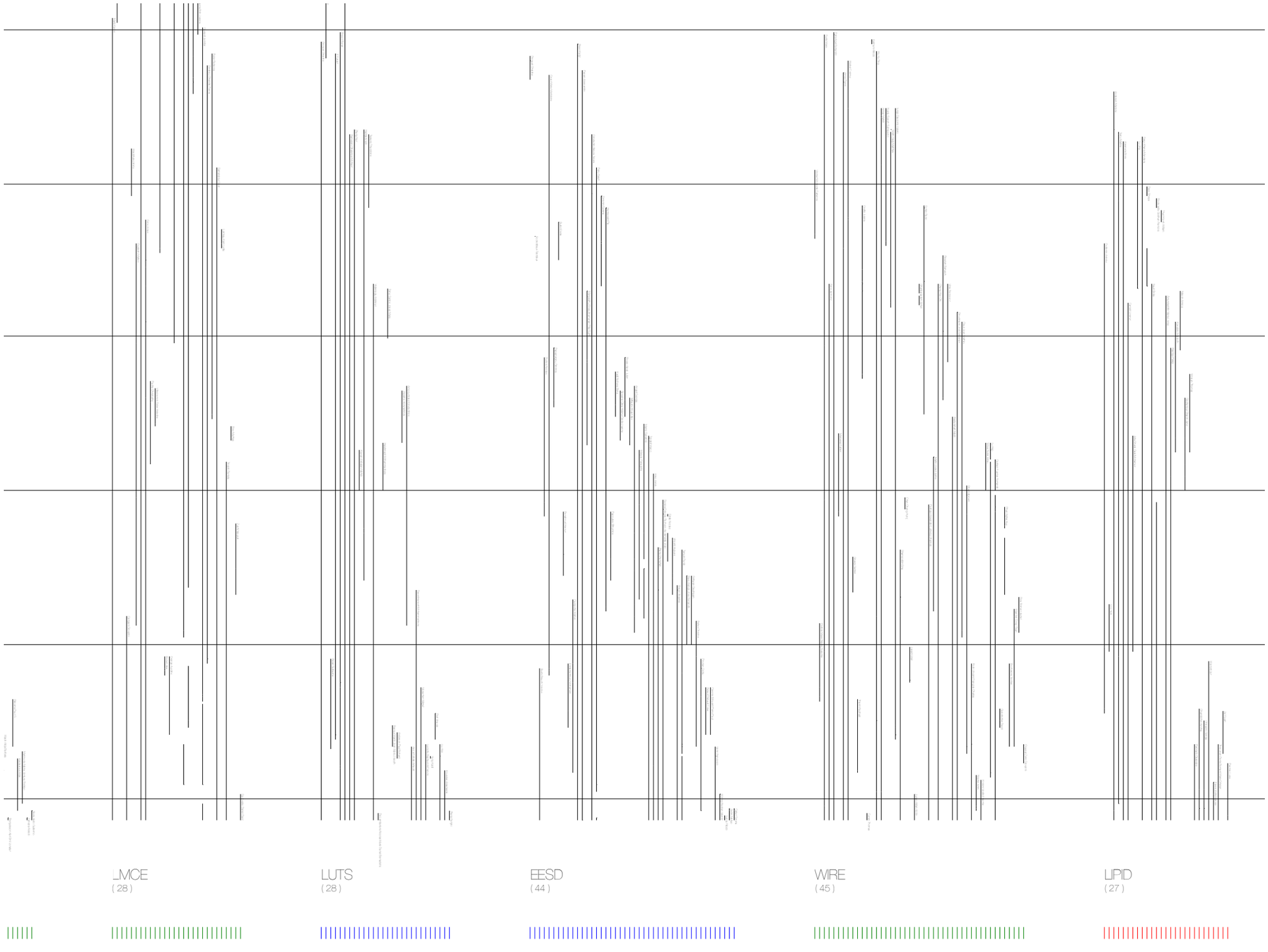
Concept IV — Distant View



Timeline visualization 1/3

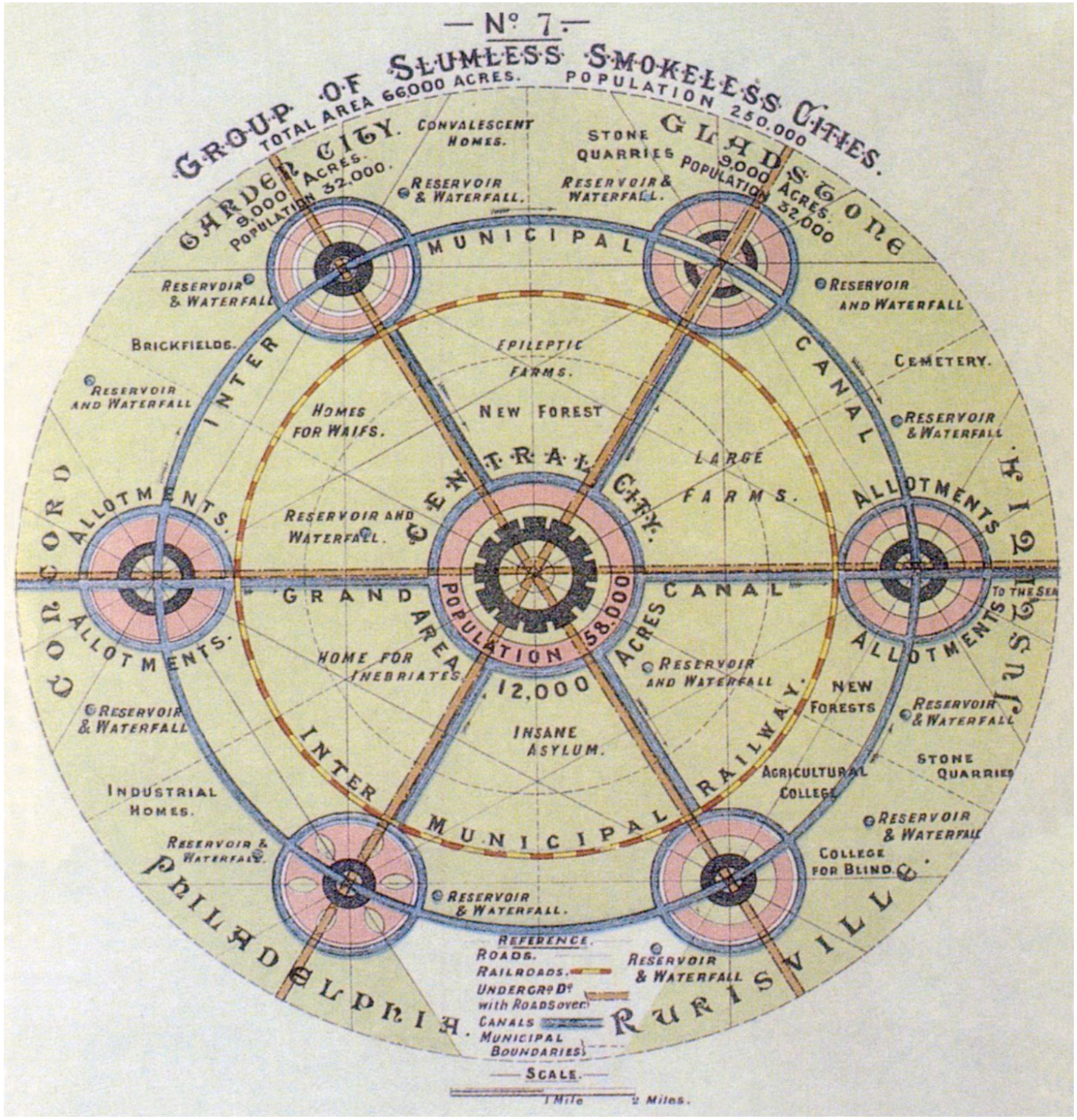


Timeline visualization 2/3

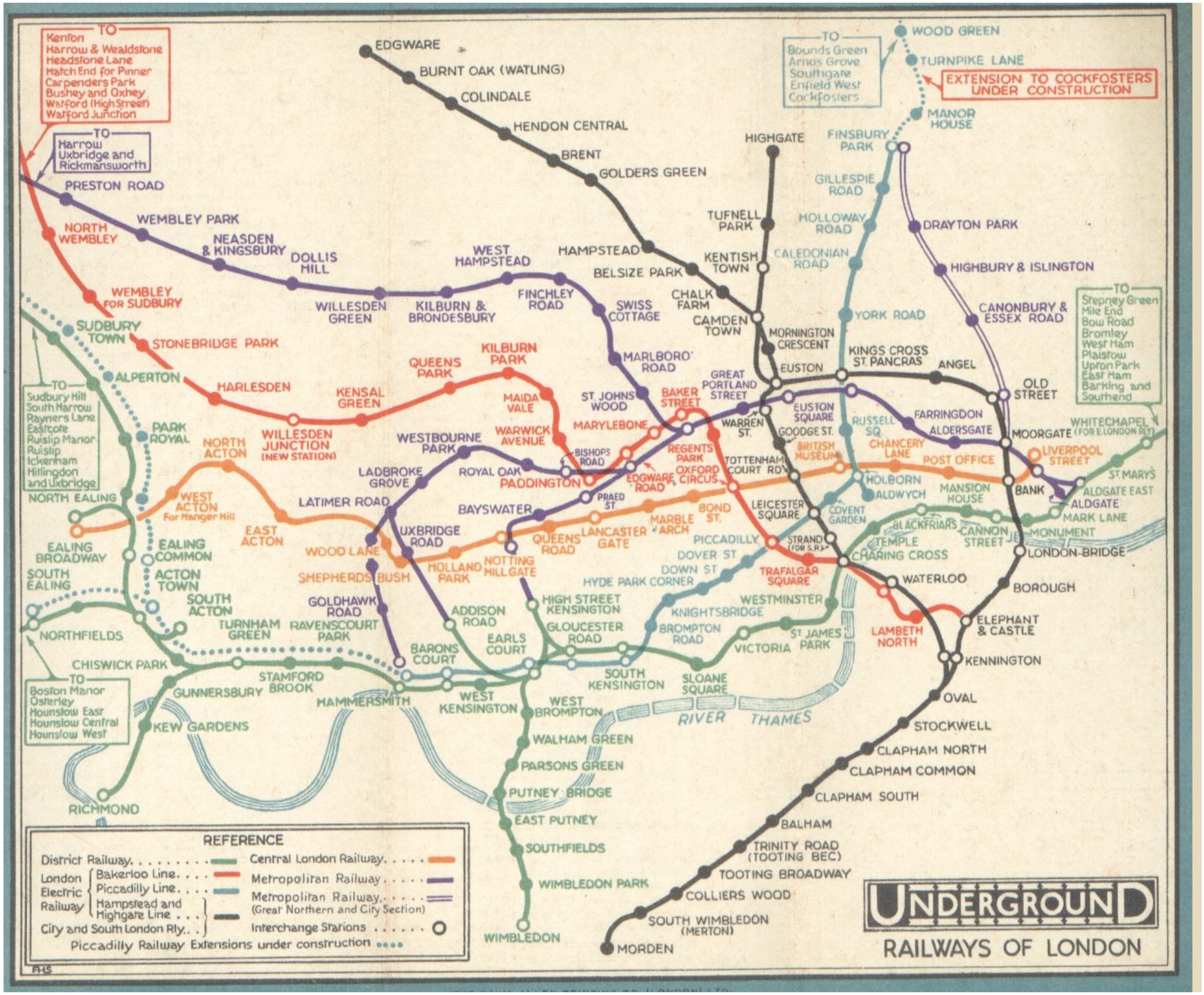


Timeline visualization 3/3

Concept V — Utopia of the perfect network

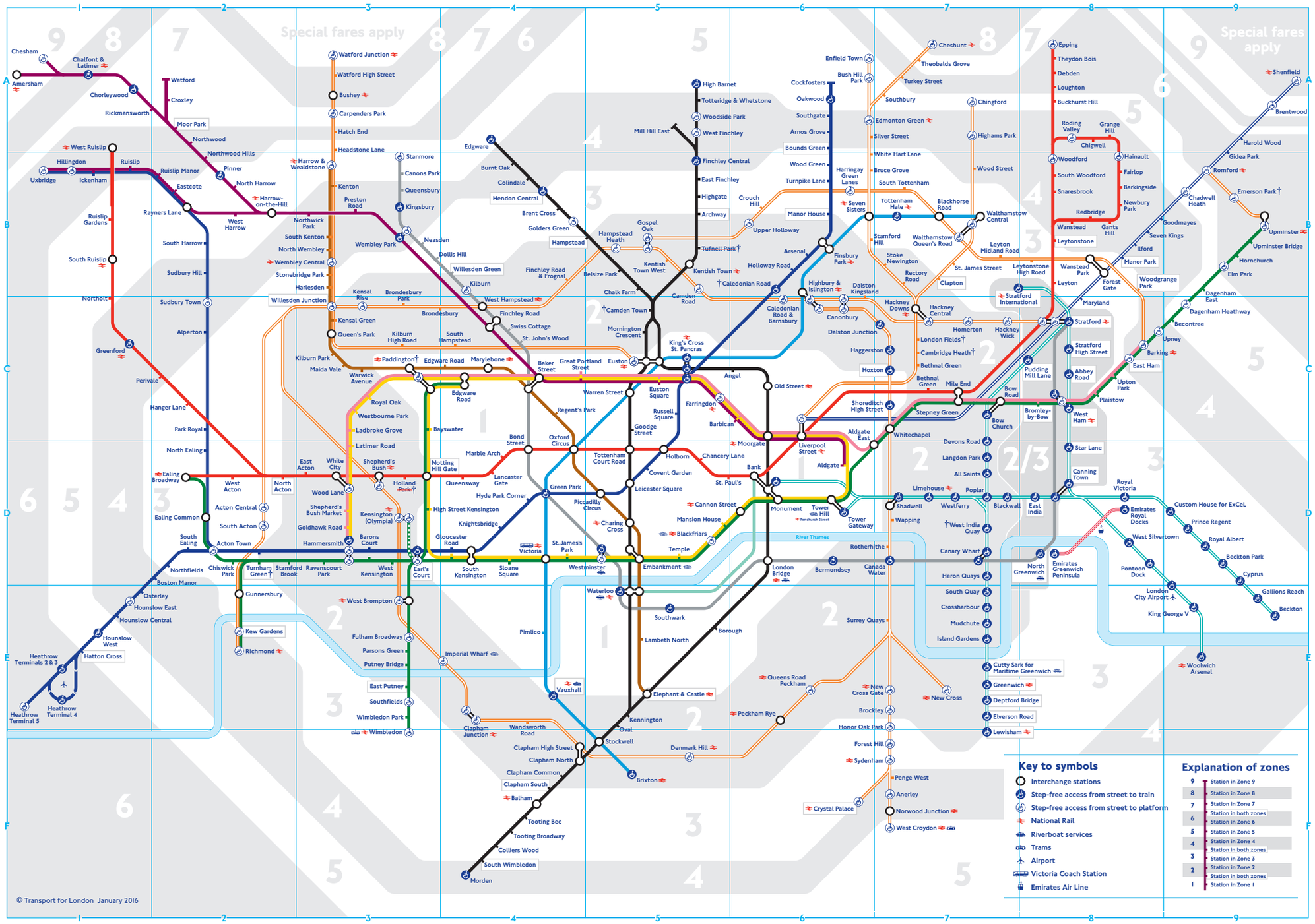


Utopia of the representation
The garden city utopia: a critical biography of Ebenezer Howard



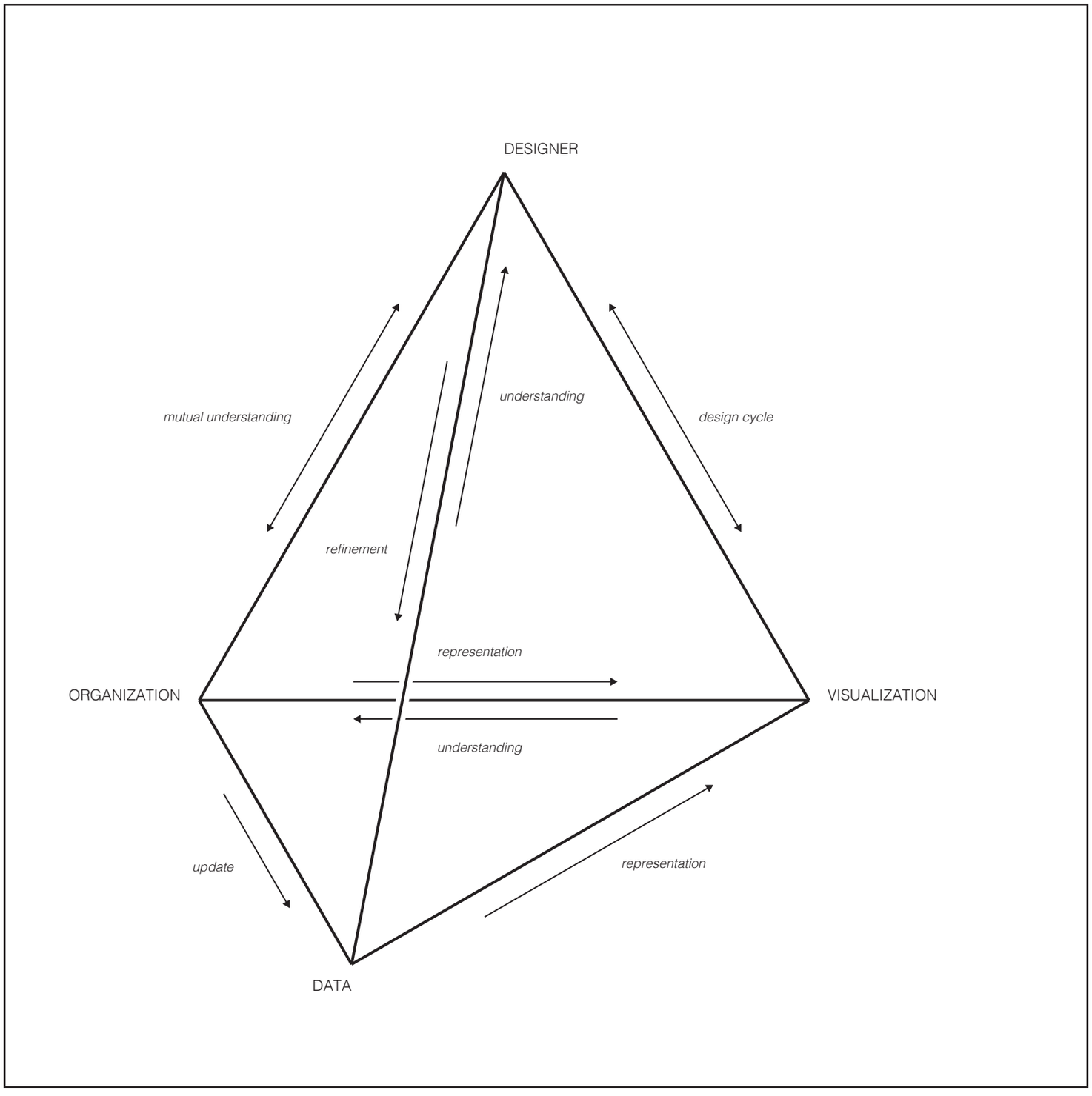
Before Harry Beck

After Harry Beck

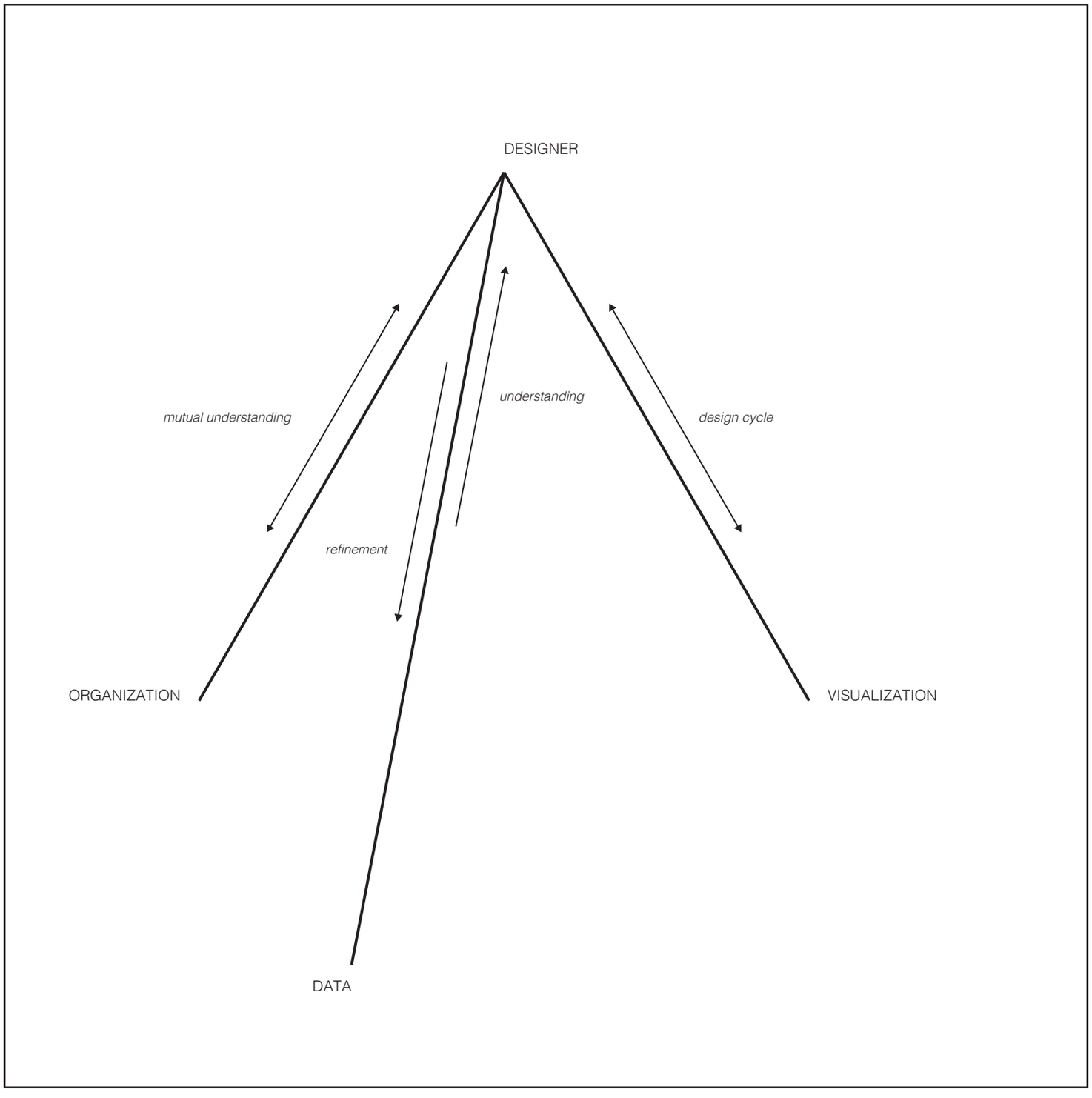

Special fares apply
Special fares apply
Chesham
Amersham
Chalfont & Latimer
Chorleywood
Rickmansworth
Watford
Croxley
Moor Park
Northwood
Northwood Hills
Pinner
North Harrow
Harrow-on-the-Hill
West Harrow
Rayners Lane
Uxbridge
Hillingdon
Ickenham
Ruislip
Ruislip Manor
Eastcote
West Ruislip
Ruislip Gardens
South Ruislip
Northolt
Greenford
Perivale
Hanger Lane
Park Royal
North Ealing
Ealing Broadway
South Harrow
Sudbury Hill
Sudbury Town
Alperton
Watford Junction
Watford High Street
Bushey
Carpenders Park
Hatch End
Headstone Lane
Harrow & Wealdstone
Kenton
Preston Road
Northwick Park
South Kenton
North Wembley
Wembley Central
Stonebridge Park
Harlesden
Willesden Junction
Wembley Park
Stanmore
Canons Park
Queensbury
Kingsbury
Neasden
Dollis Hill
Willesden Green
Kilburn
West Hampstead
Kensal Rise
Brondesbury Park
Brondesbury
Kensal Green
Queen's Park
Kilburn High Road
South Hampstead
Edgware
Burnt Oak
Colindale
Hendon Central
Brent Cross
Golders Green
Hampstead
Finchley Road & Frognal
Finchley Road
Swiss Cottage
St. John's Wood
Belsize Park
Hampstead Heath
Gospel Oak
Chalk Farm
Mill Hill East
High Barnet
Totteridge & Whetstone
Woodside Park
West Finchley
Finchley Central
East Finchley
Highgate
Archway
Tufnell Park†
Kentish Town West
Kentish Town
†Camden Road
Camden Road
†Camden Town
Crouch Hill
Upper Holloway
Holloway Road
Arsenal
Manor House
Turnpike Lane
Harringay Green Lanes
Seven Sisters
Finsbury Park
Cockfosters
Oakwood
Southgate
Arnos Grove
Bounds Green
Wood Green
Enfield Town
Bush Hill Park
Cheshunt
Theobalds Grove
Turkey Street
Southbury
Edmonton Green
Silver Street
White Hart Lane
Bruce Grove
South Tottenham
Tottenham Hale
Stamford Hill
Stoke Newington
Rectory Road
Clapton
Blackhorse Road
Walthamstow Queen's Road
Walthamstow Central
St. James Street
Leyton Midland Road
Chingford
Highams Park
Wood Street
Epping
Theydon Bois
Debden
Loughton
Buckhurst Hill
Roding Valley
Grange Hill
Chigwell
Woodford
South Woodford
Snaresbrook
Redbridge
Wanstead
Gants Hill
Leytonstone
Hainault
Fairlop
Barkingside
Newbury Park
Leytonstone High Road
Wanstead Park
Leyton
Forest Gate
Maryland
Stratford
Stratford International
Stratford High Street
Abbey Road
Pudding Mill Lane
Bromley-by-Bow
West Ham
Star Lane
Canning Town
Manor Park
Ilford
Seven Kings
Goodmayes
Woodgrange Park
Shenfield
Brentwood
Harold Wood
Gidea Park
Romford
Emerson Park†
Upminster
Upminster Bridge
Hornchurch
Elm Park
Chadwell Heath
Dagenham East
Dagenham Heathway
Becontree
Upney
Barking
East Ham
Upton Park
Plaistow
Royal Victoria
Custom House for ExCeL
Prince Regent
Royal Albert
Beckton Park
Cyprus
Gallions Reach
Beckton
Emirates Royal Docks
West Silvertown
Pontoon Dock
London City Airport
King George V
Woolwich Arsenal
Hackney Downs
Hackney Central
Hackney Wick
Homerton
London Fields†
Cambridge Heath†
Bethnal Green
Mile End
Bow Road
Bow Church
Devons Road
Langdon Park
All Saints
Poplar
Limehouse
Westferry
Blackwall
East India
Canary Wharf
Heron Quays
South Quay
Crossharbour
Mudchute
Island Gardens
Cutty Sark for Maritime Greenwich
Greenwich
Deptford Bridge
Elverson Road
Lewisham
North Greenwich
Emirates Greenwich Peninsula
Dalston Kingsland
Dalston Junction
Canonbury
Highbury & Islington
Caledonian Road & Barnsbury
Haggerston
Hoxton
Shoreditch High Street
Whitechapel
Aldgate East
Aldgate
Liverpool Street
Old Street
Moorgate
Bank
Monument
Tower Hill
Fenchurch Street
Tower Gateway
Shadwell
Wapping
Rotherhithe
Bermondsey
Canada Water
Surrey Quays
New Cross
New Cross Gate
Brockley
Honor Oak Park
Forest Hill
Sydenham
Penge West
Anerley
Norwood Junction
West Croydon
Queens Road Peckham
Peckham Rye
Crystal Palace
Denmark Hill
Camden Road
Caledonian Road
Mornington Crescent
King's Cross St. Pancras
Angel
Farringdon
Barbican
Russell Square
Euston Square
Euston
Warren Street
Great Portland Street
Baker Street
Regent's Park
Goodge Street
Tottenham Court Road
Holborn
Chancery Lane
Covent Garden
Leicester Square
St. Paul's
Oxford Circus
Bond Street
Marble Arch
Lancaster Gate
Queensway
Notting Hill Gate
Bayswater
Royal Oak
Westbourne Park
Ladbroke Grove
Latimer Road
Warwick Avenue
Maida Vale
Kilburn Park
Paddington†
Edgware Road
Marylebone
Shepherd's Bush
Holland Park†
White City
East Acton
North Acton
Wood Lane
West Acton
Ealing Common
Acton Central
South Acton
Acton Town
South Ealing
Northfields
Boston Manor
Osterley
Hounslow East
Hounslow Central
Hounslow West
Hatton Cross
Heathrow Terminals 2 & 3
Heathrow Terminal 4
Heathrow Terminal 5
Shepherd's Bush Market
Goldhawk Road
Hammersmith
Barons Court
Kensington (Olympia)
West Kensington
Earl's Court
Gunnersbury
Chiswick Park
Turnham Green†
Stamford Brook
Ravenscourt Park
Kew Gardens
Richmond
West Brompton
Fulham Broadway
Parsons Green
Putney Bridge
East Putney
Southfields
Wimbledon Park
Wimbledon
Gloucester Road
South Kensington
Sloane Square
High Street Kensington
Knightsbridge
Hyde Park Corner
Green Park
Victoria
St. James's Park
Westminster
Piccadilly Circus
Charing Cross
Cannon Street
Mansion House
Blackfriars
Temple
Embankment
Waterloo
Southwark
Lambeth North
Borough
London Bridge
Pimlico
Vauxhall
Elephant & Castle
Kennington
Oval
Stockwell
Brixton
Clapham Junction
Wandsworth Road
Clapham High Street
Clapham North
Clapham Common
Clapham South
Balham
Tooting Bec
Tooting Broadway
Colliers Wood
South Wimbledon
Morden
River Thames
Key to symbols
Interchange stations
Step-free access from street to train
Step-free access from street to platform
National Rail
Riverboat services
Trams
Airport
Victoria Coach Station
Emirates Air Line
Explanation of zones
9 Station in Zone 9
8 Station in Zone 8
7 Station in Zone 7
Station in both zones
6 Station in Zone 6
5 Station in Zone 5
4 Station in Zone 4
Station in both zones
3 Station in Zone 3
2 Station in Zone 2
Station in both zones
1 Station in Zone 1
© Transport for London January 2016

Now

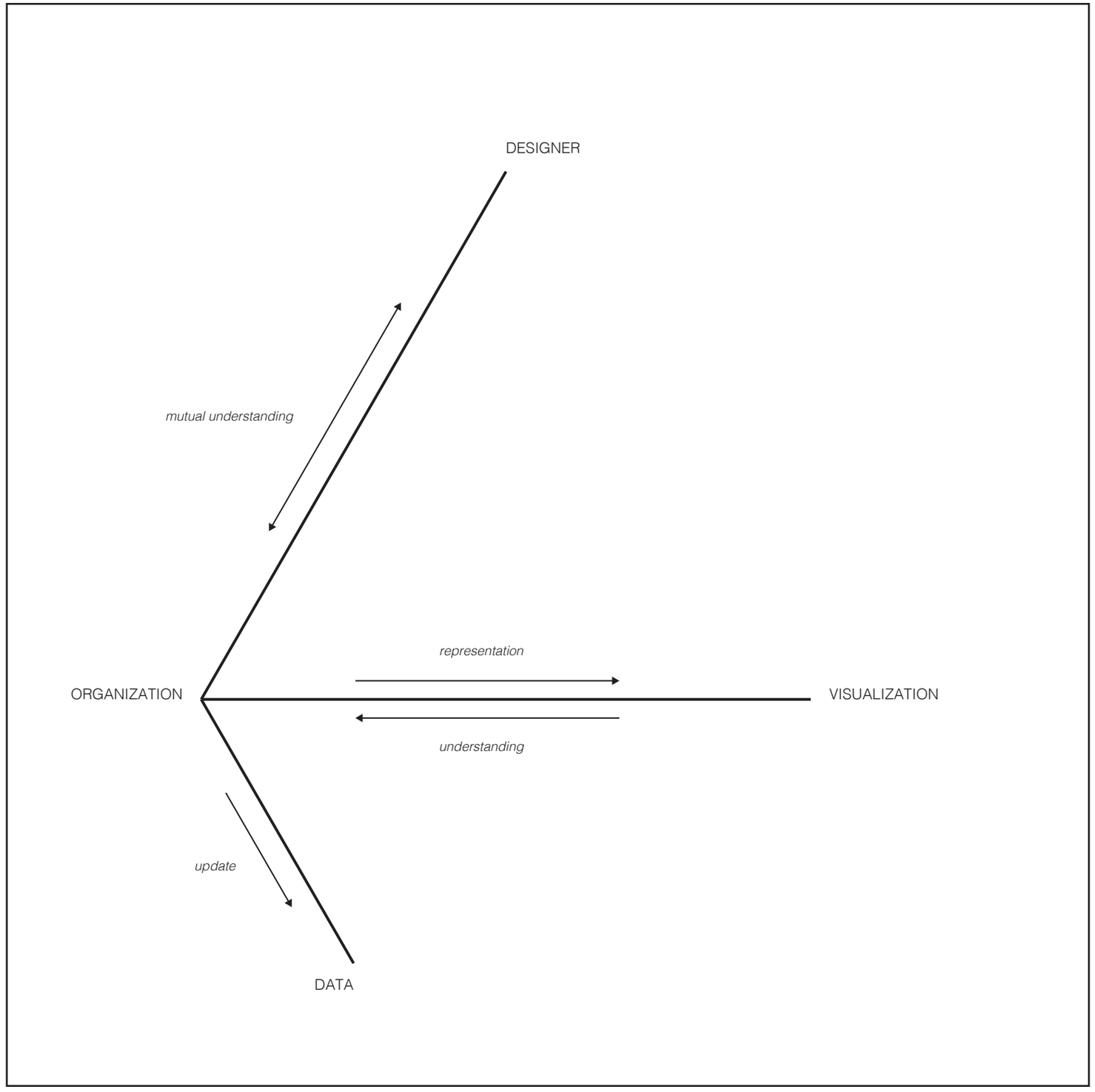
Concept VI — Pyramid


DESIGNER
mutual understanding
understanding
design cycle
refinement
representation
ORGANIZATION
VISUALIZATION
understanding
update
representation
DATA

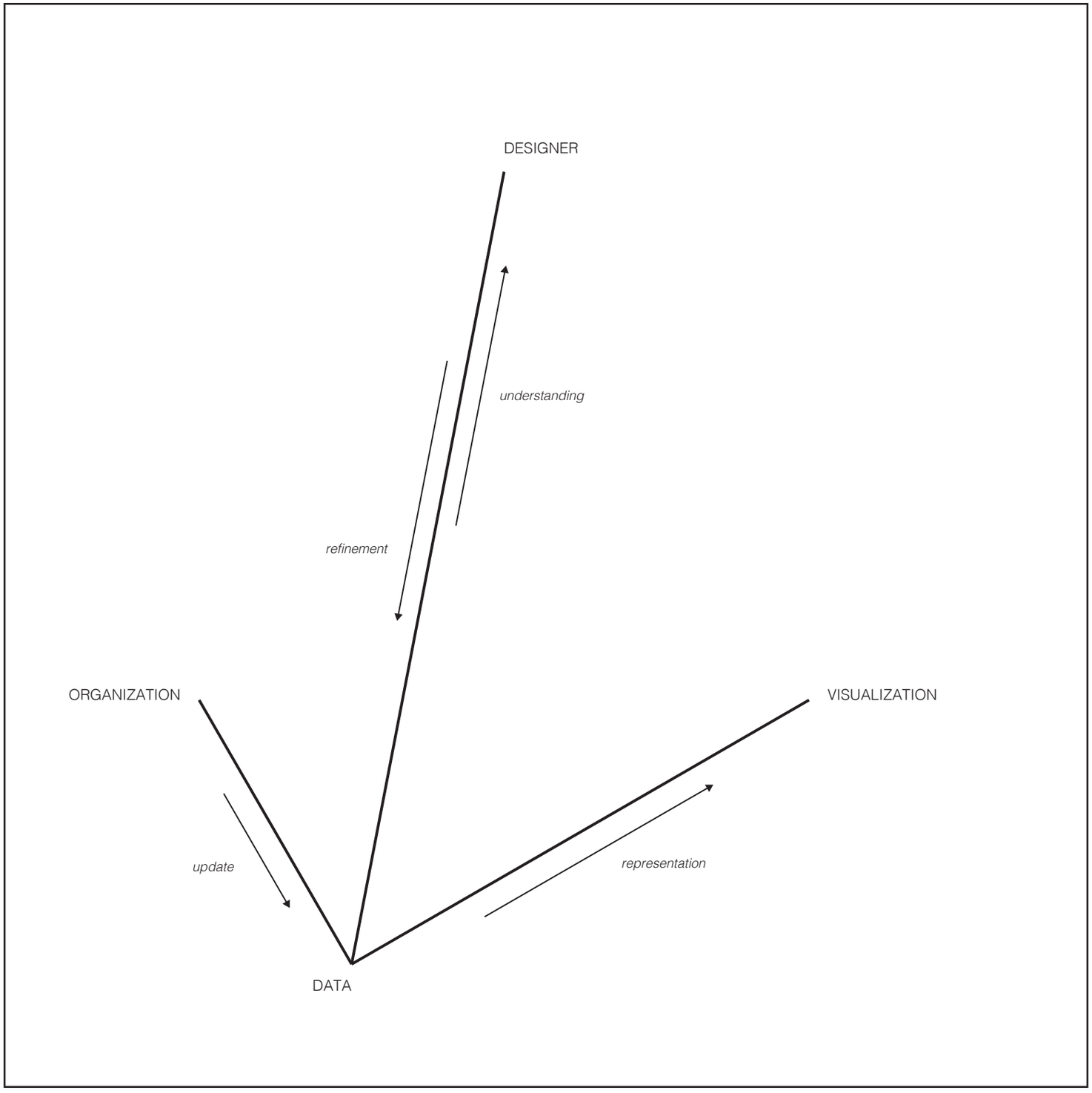
Pyramid



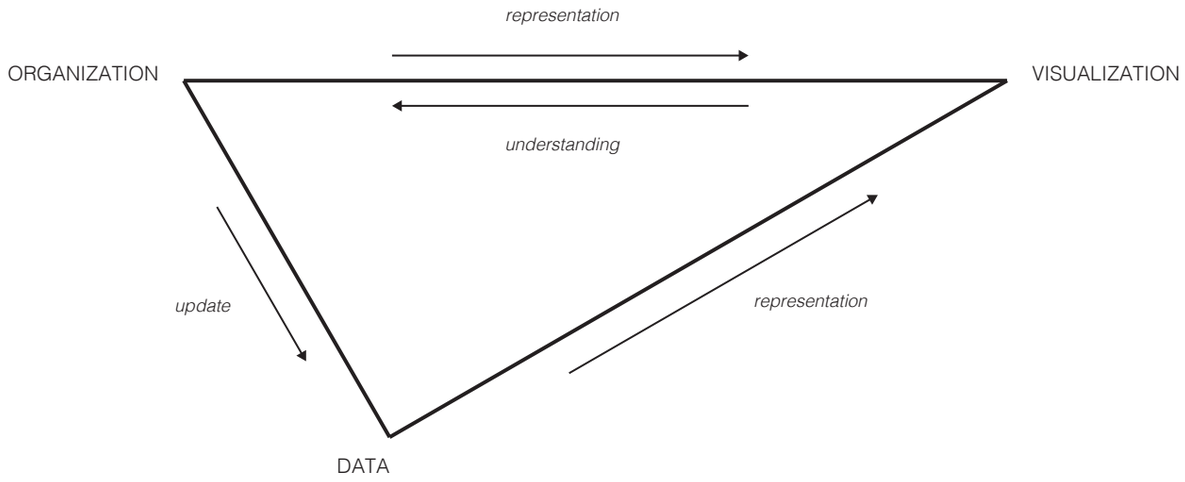
Pyramid - designer



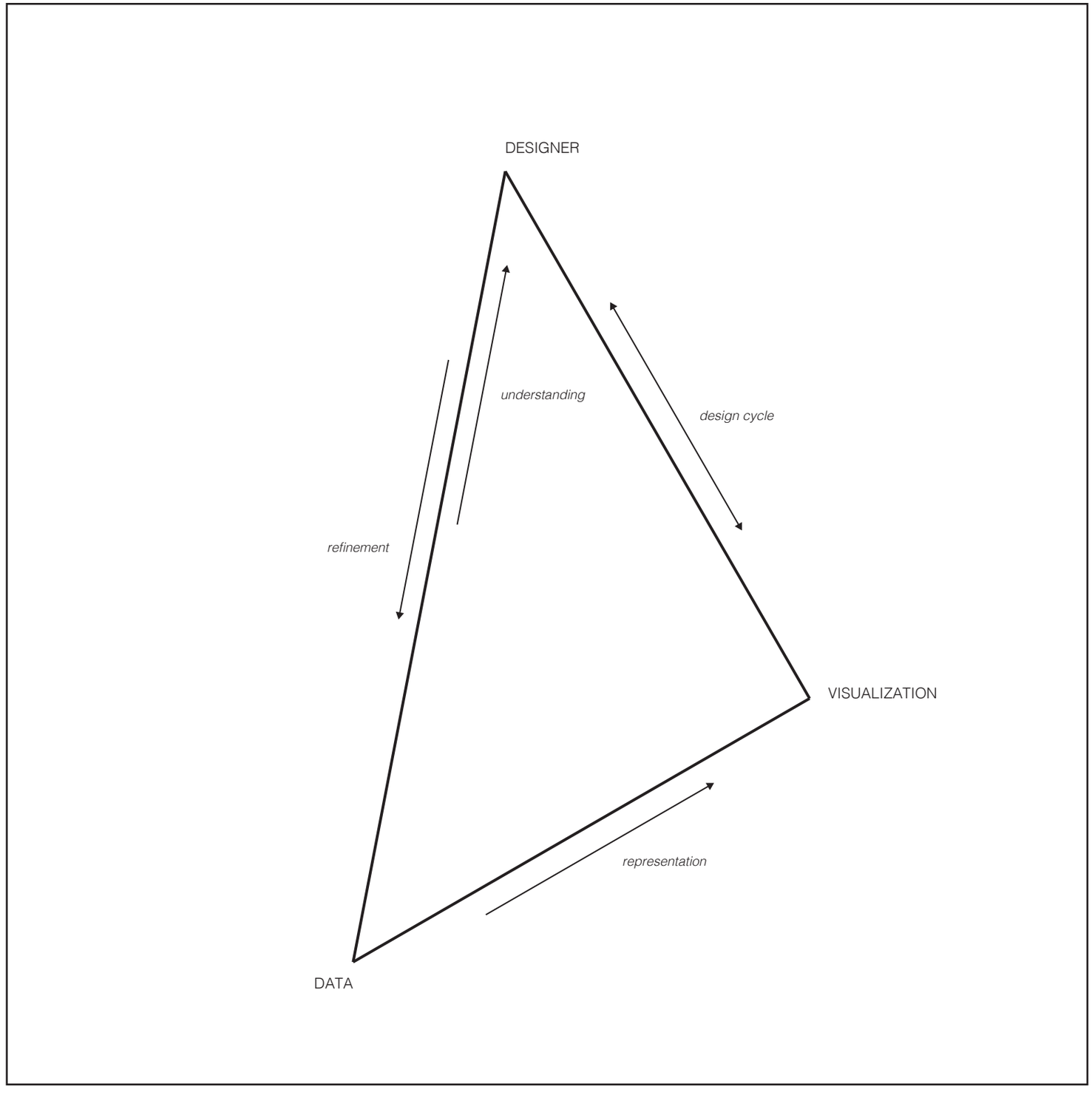
Pyramid - reader



Pyramid - data

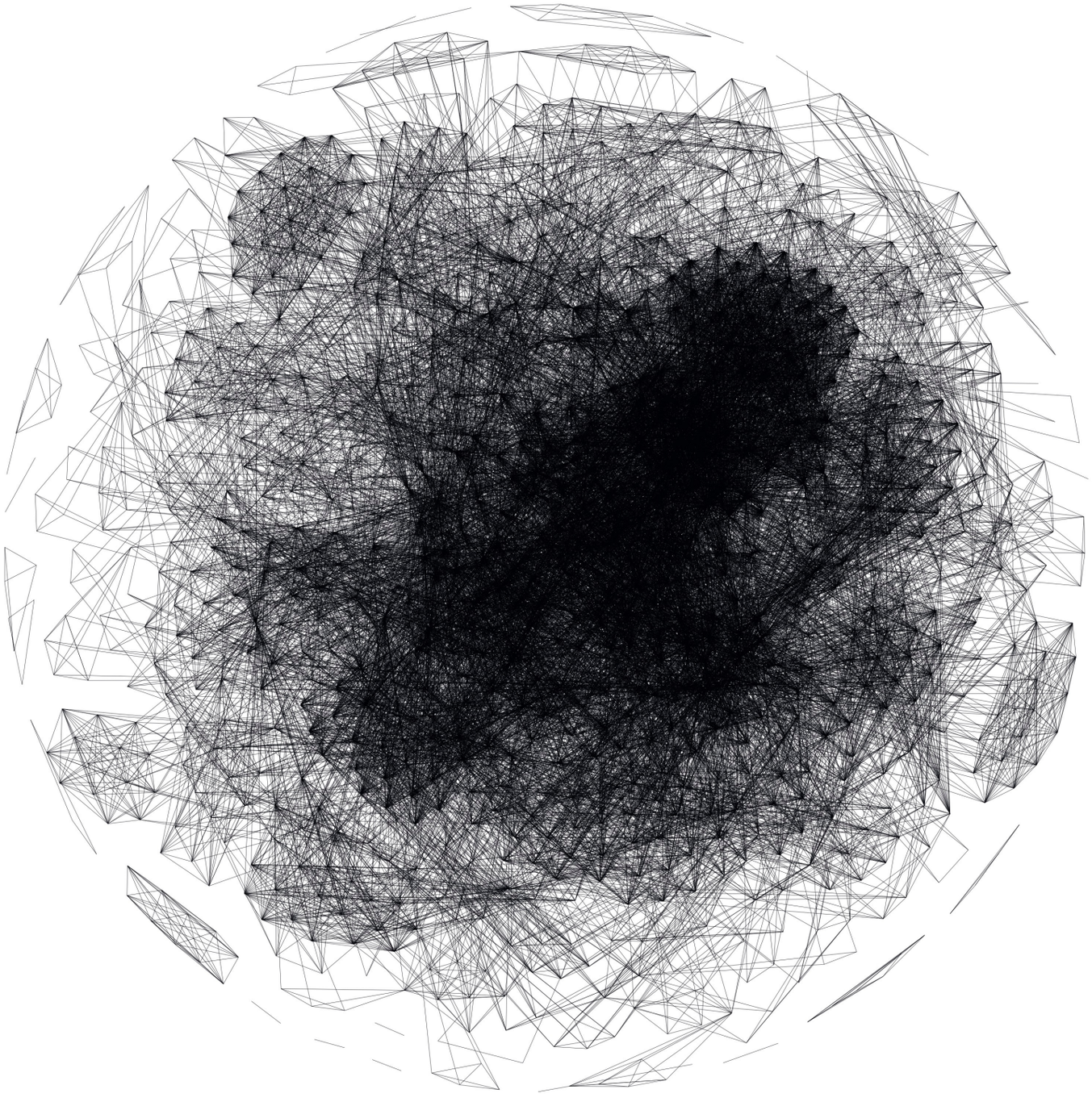


Pyramid - cycle I

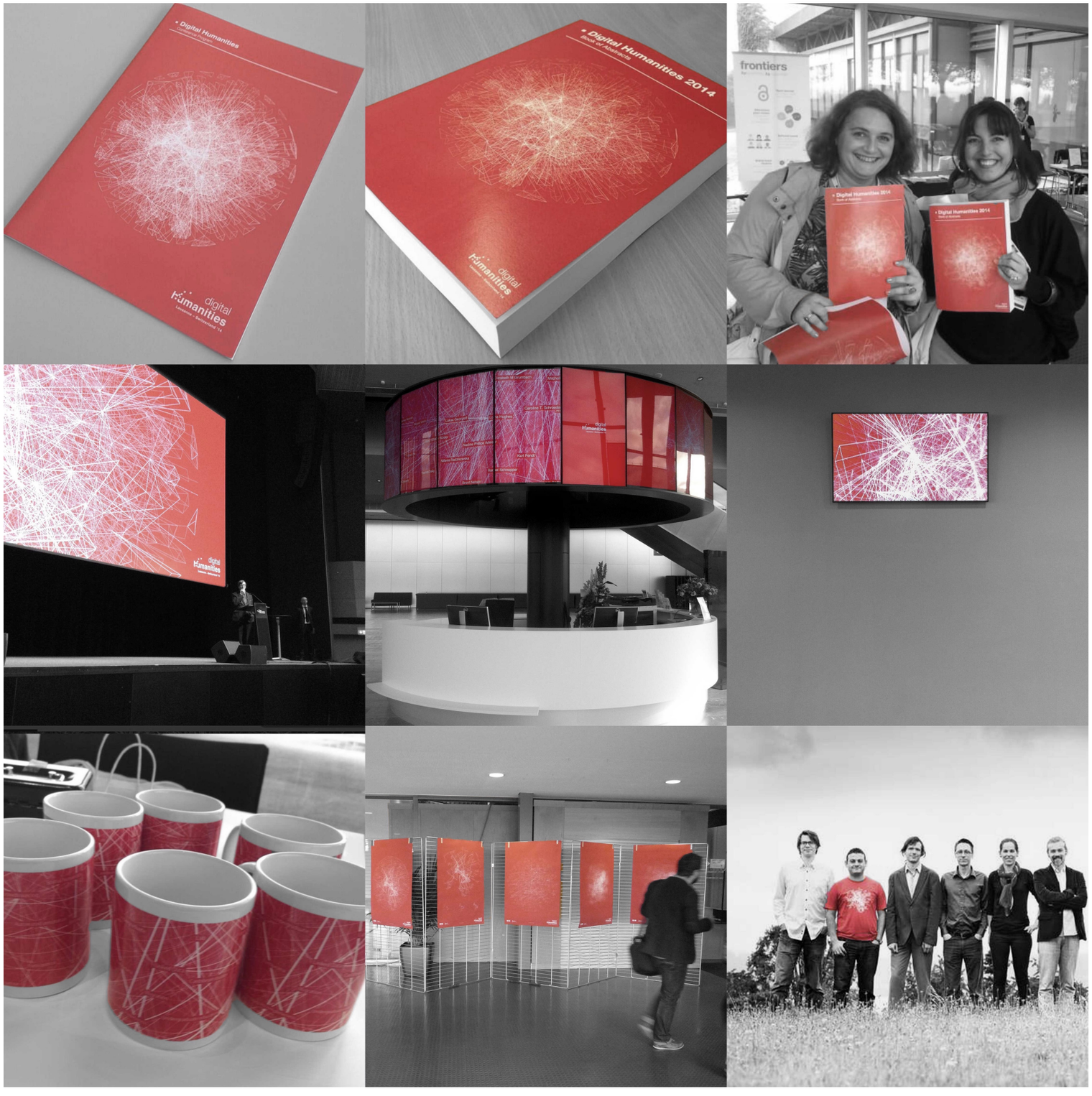


Pyramid - cycle II

Concept VII — Appropriation



Concept VII — Appropriation



Concept VII — Appropriation

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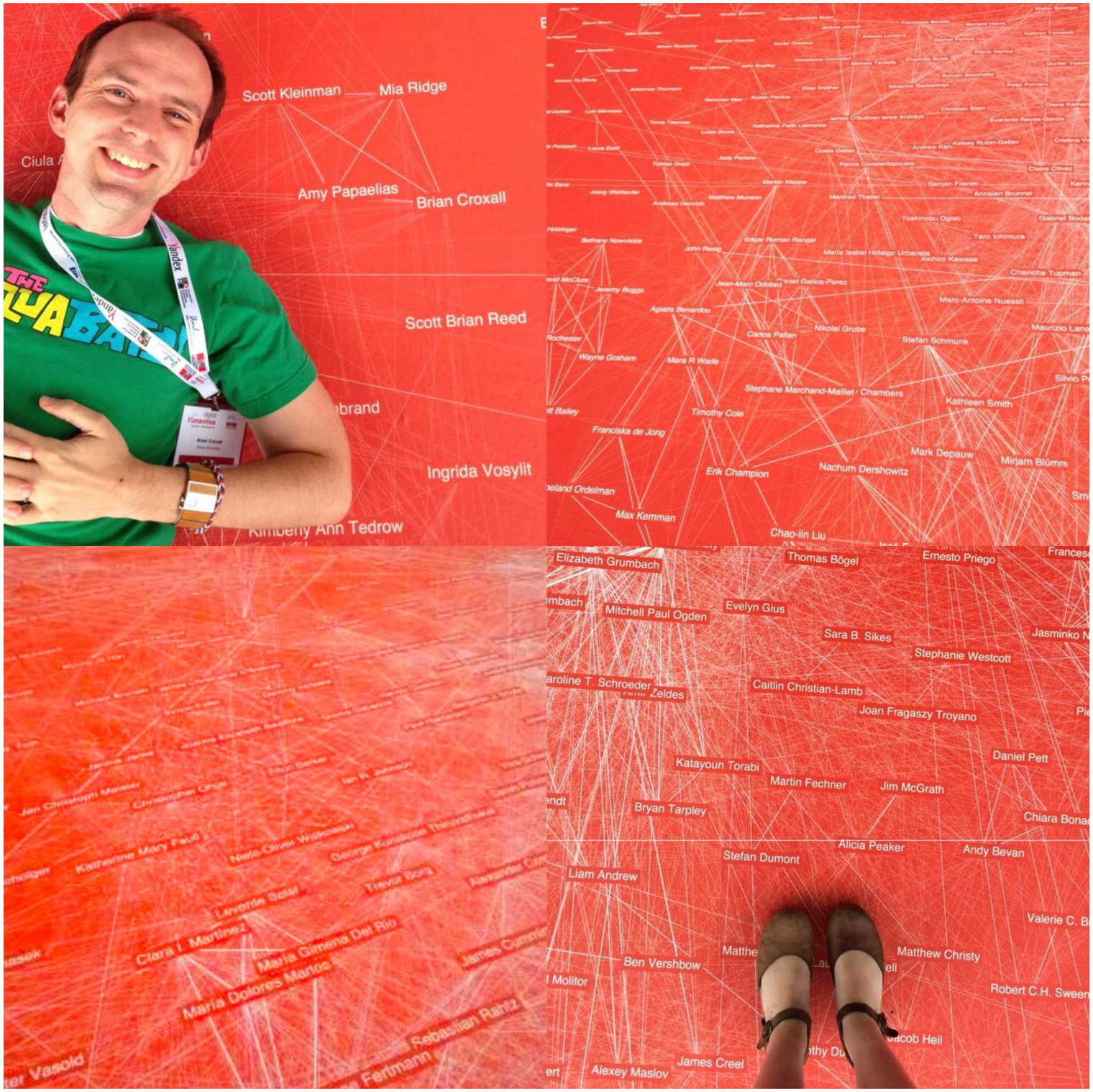

Concept VII — Appropriation

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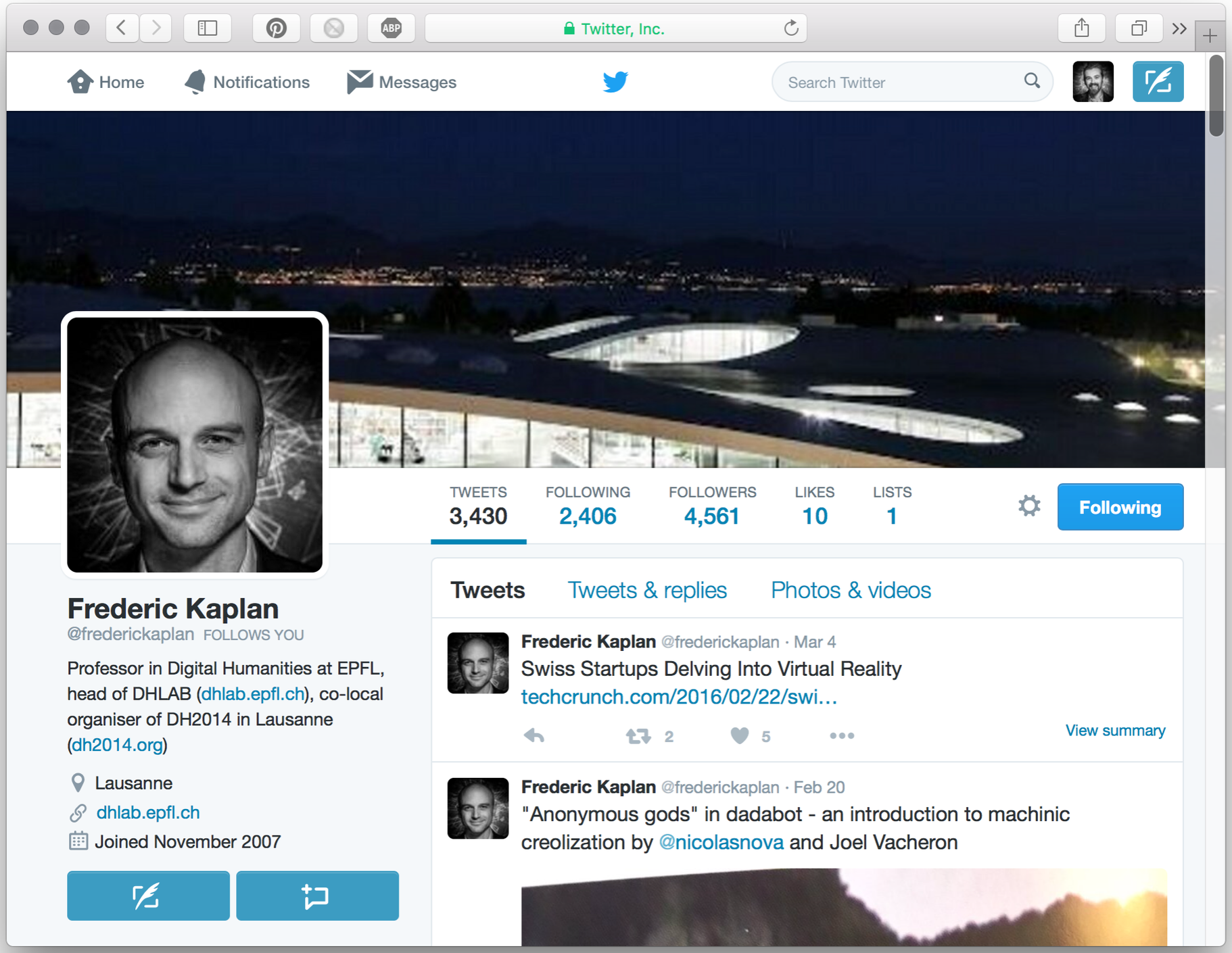


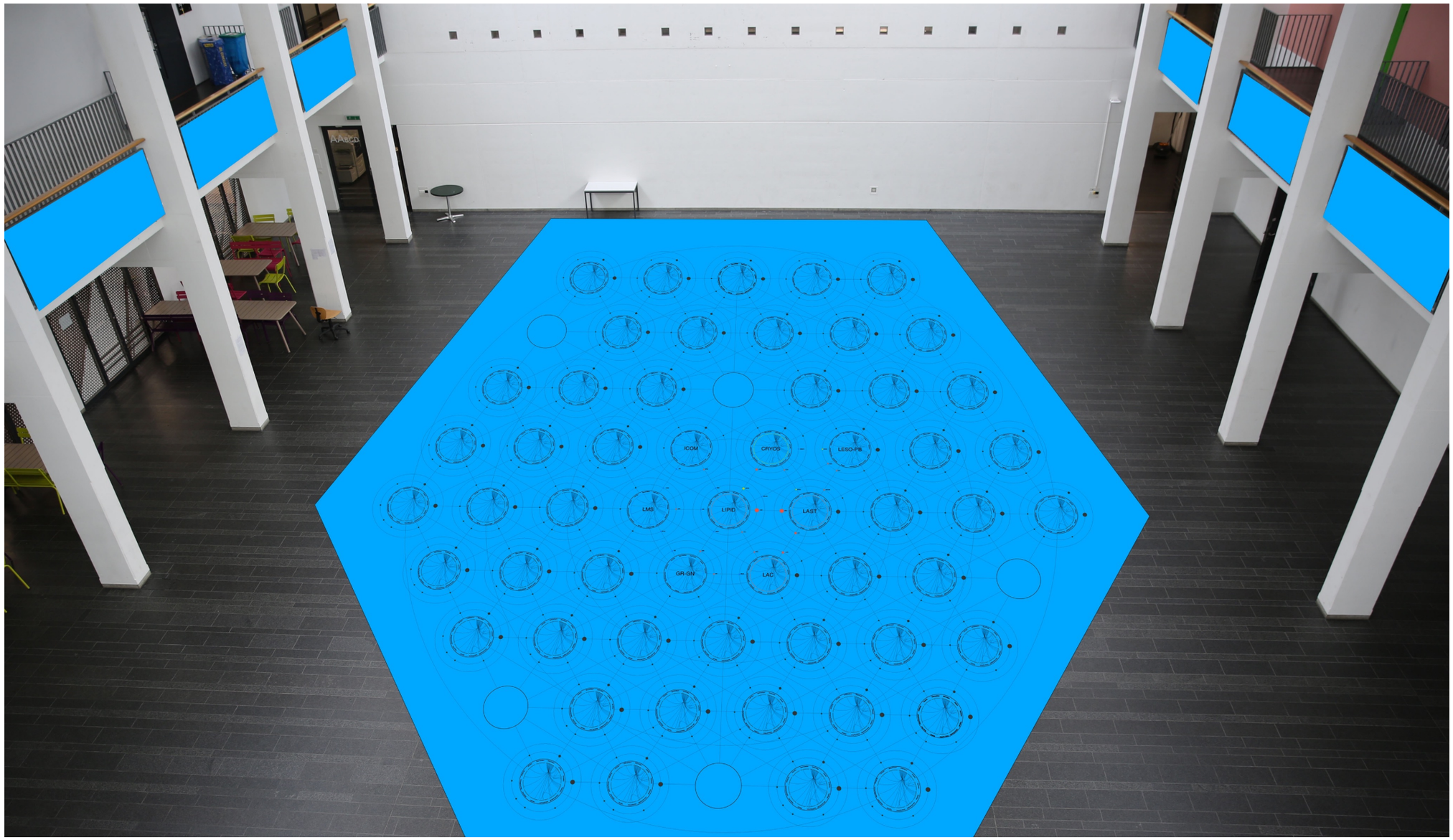
Concept VII — Appropriation

Concept XIII — Materiality

Pieter Laurens Mol, Specific Impulse 1985

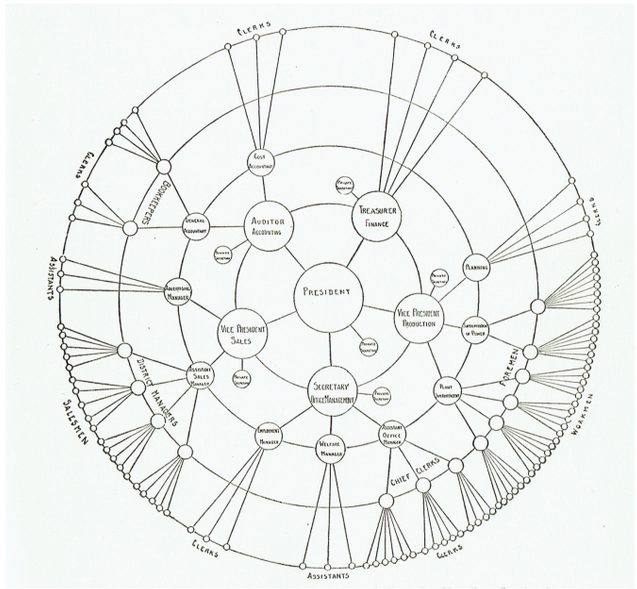
Posters

Large visualizations

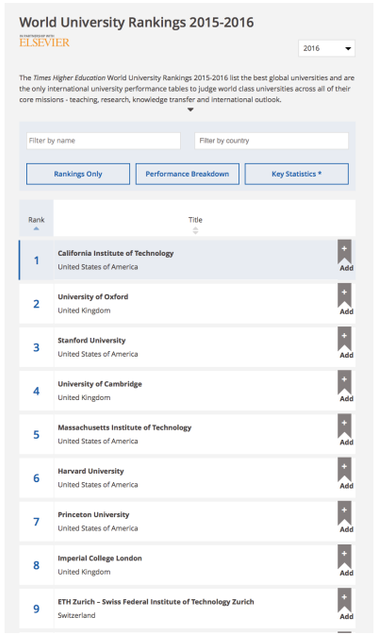


Very large visualization

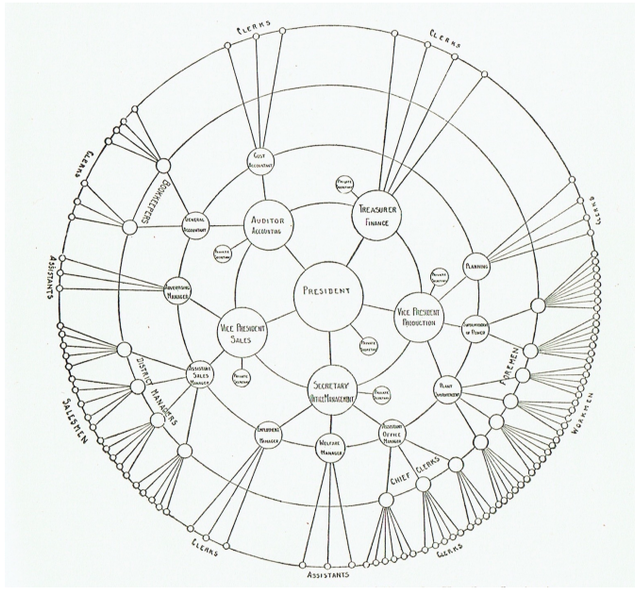
Current Design



The forms of representation

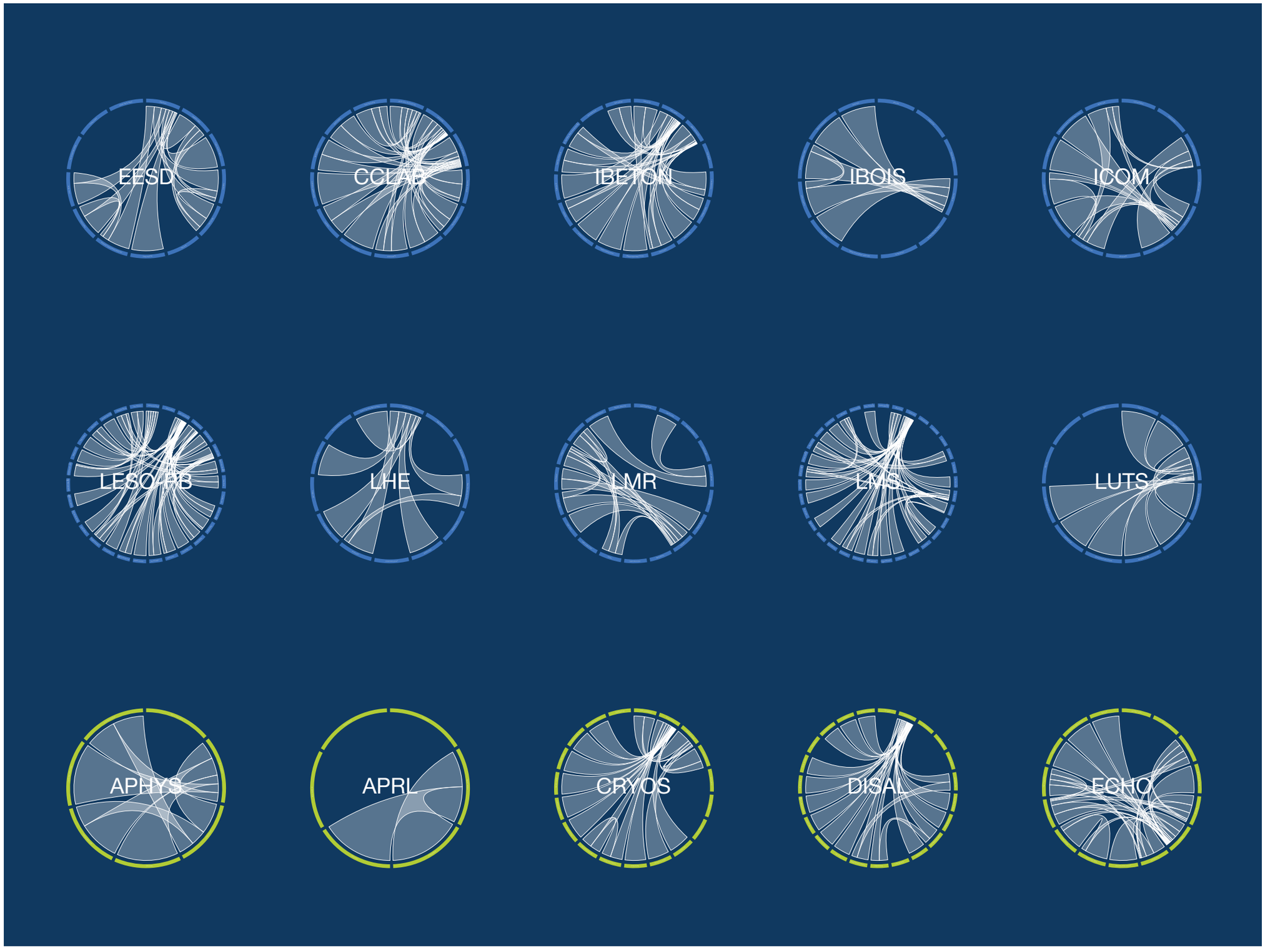

World University Rankings 2015-2016
ELSEVIER
2016
The Times Higher Education World University Rankings 2015-2016 list the best global universities and are the only international university performance tables to judge world class universities across all of their core missions - teaching, research, knowledge transfer and international outlook.
Filter by name
Filter by country
Rankings Only
Performance Breakdown
Key Statistics *
Rank
Title
1 California Institute of Technology United States of America Add
2 University of Oxford United Kingdom Add
3 Stanford University United States of America Add
4 University of Cambridge United Kingdom Add
5 Massachusetts Institute of Technology United States of America Add
6 Harvard University United States of America Add
7 Princeton University United States of America Add
8 Imperial College London United Kingdom Add
9 ETH Zurich – Swiss Federal Institute of Technology Zurich Switzerland Add

The forms of representation

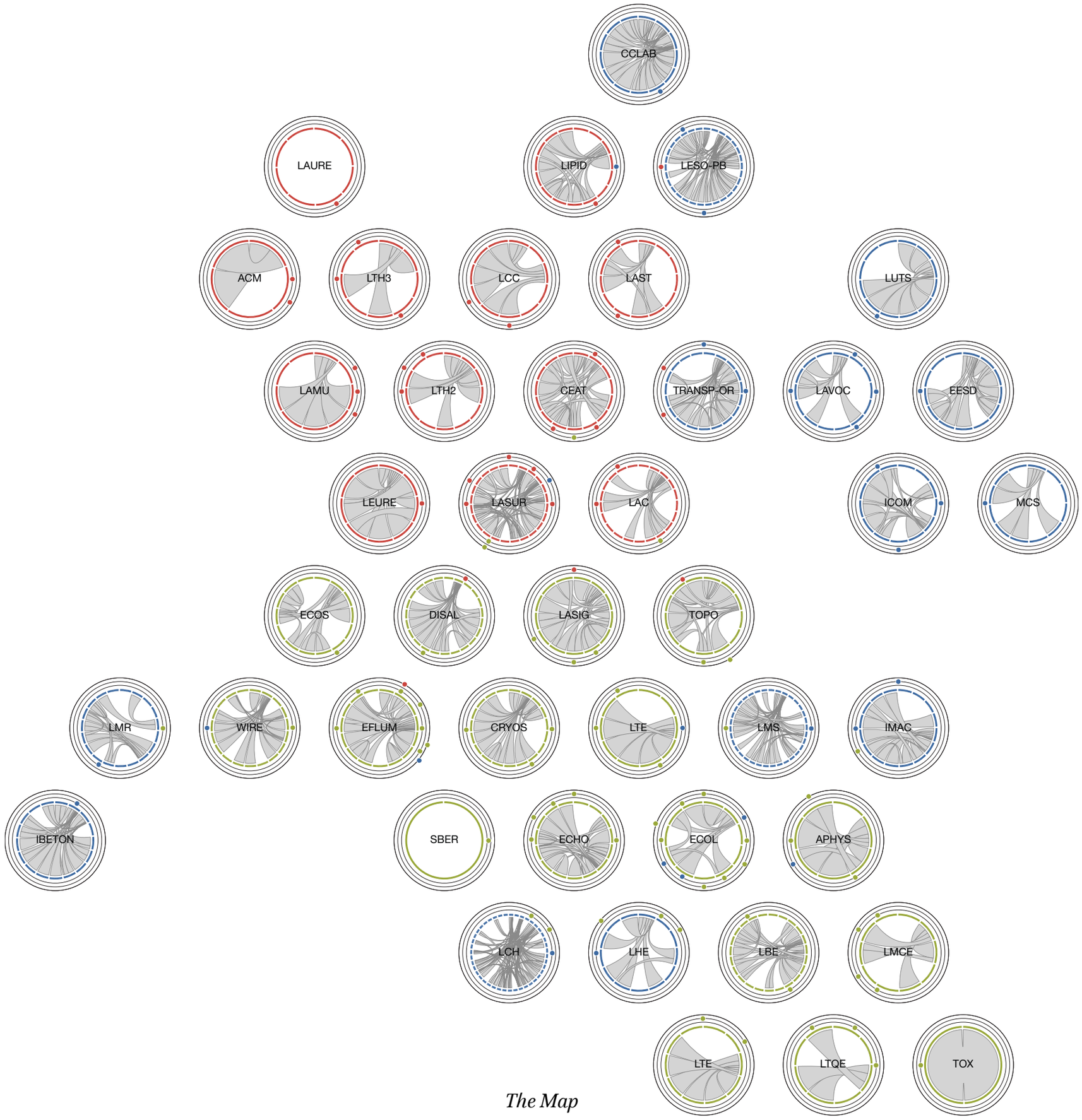

Clerks
Clerks
Clerks

Chord diagram

Chord diagram



Each laboratory has a special shape


CCLAB
LAURE
LIPID
LESO-PB
ACM
LTH3
LCC
LAST
LUTS
LAMU
LTH2
CEAT
TRANSP-OR
LAVOC
EESD
LEURE
LASUR
LAC
ICOM
MCS
ECOS
DISAL
LASIG
TOPO
LMR
WIRE
EFLUM
CRYOS
LTE
LMS
IMAC
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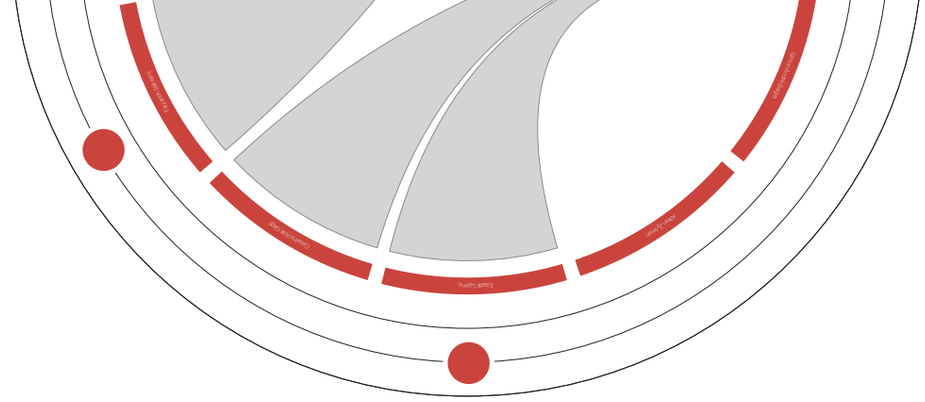
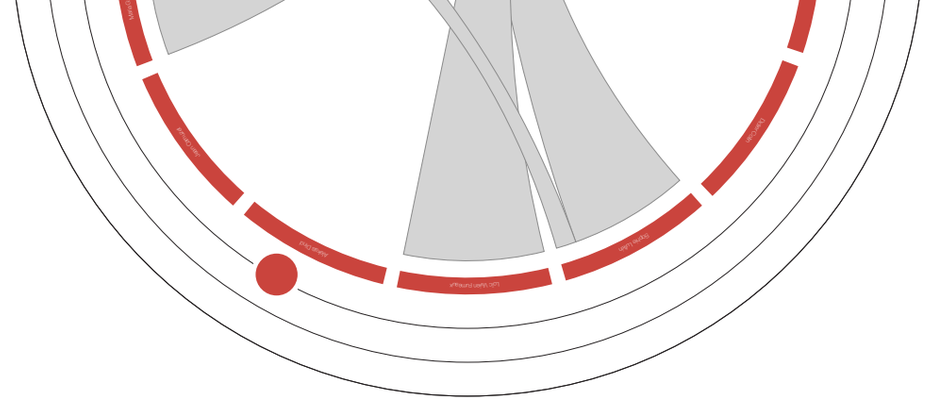
SBER
ECHO
ECOL
APHYS
LCH
LHE
LBE
LMCE
LTE
LTQE
TOX

The Map





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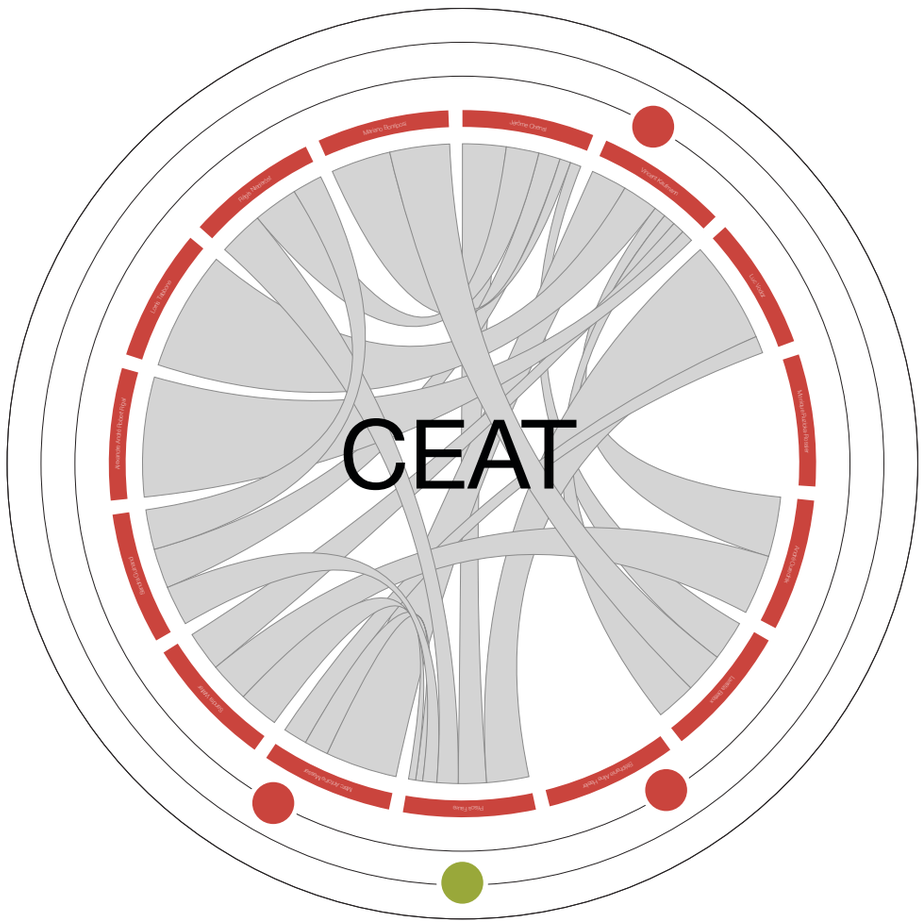

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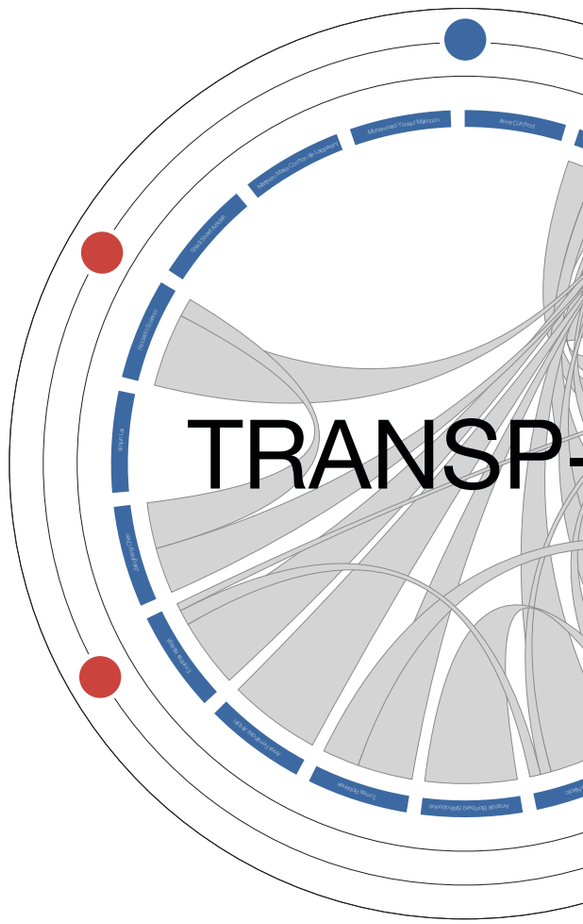

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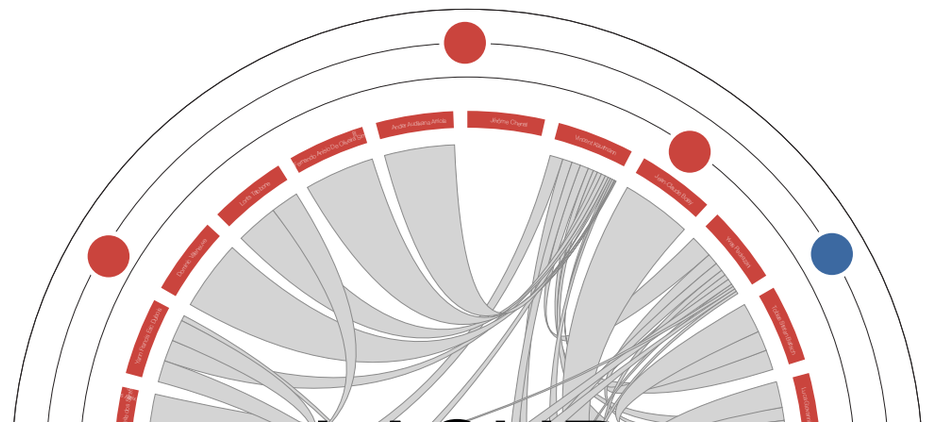

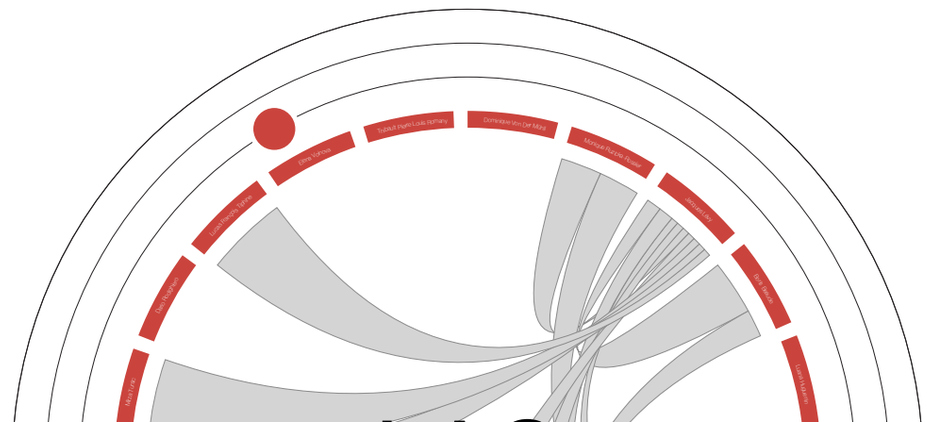

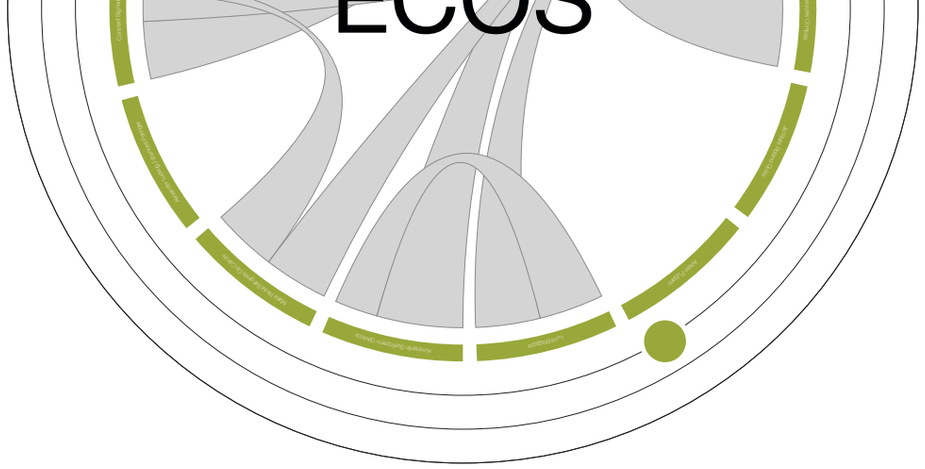
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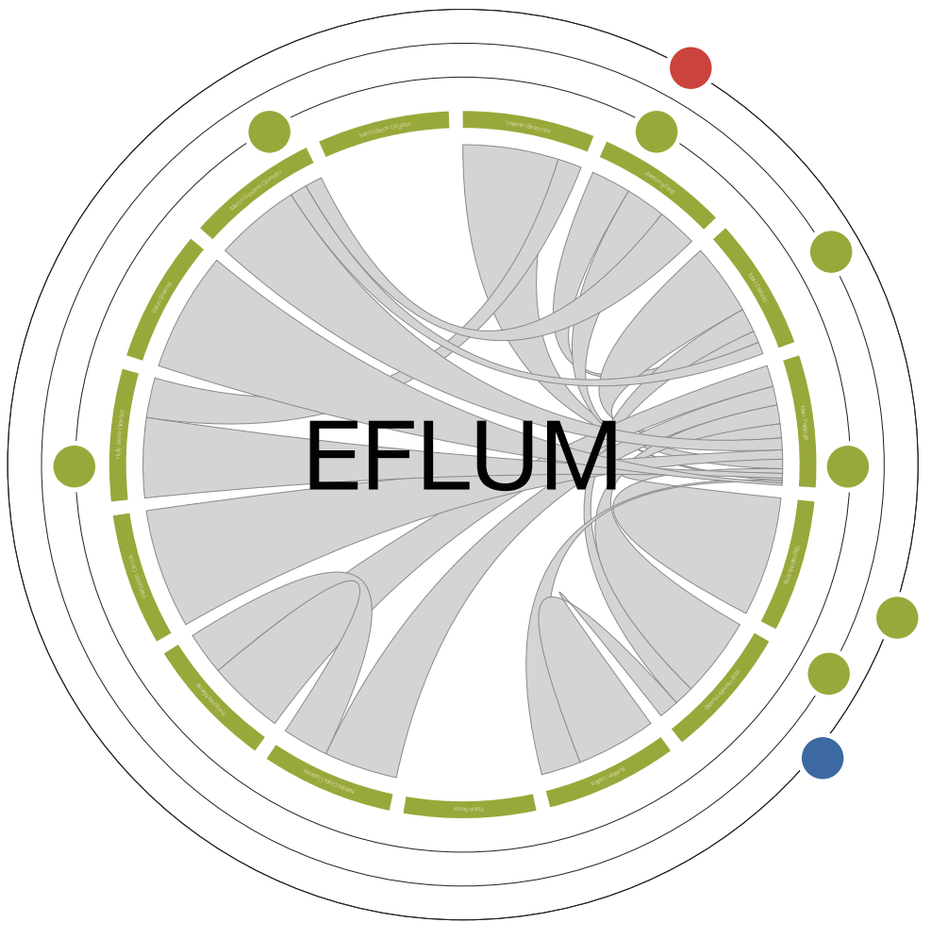
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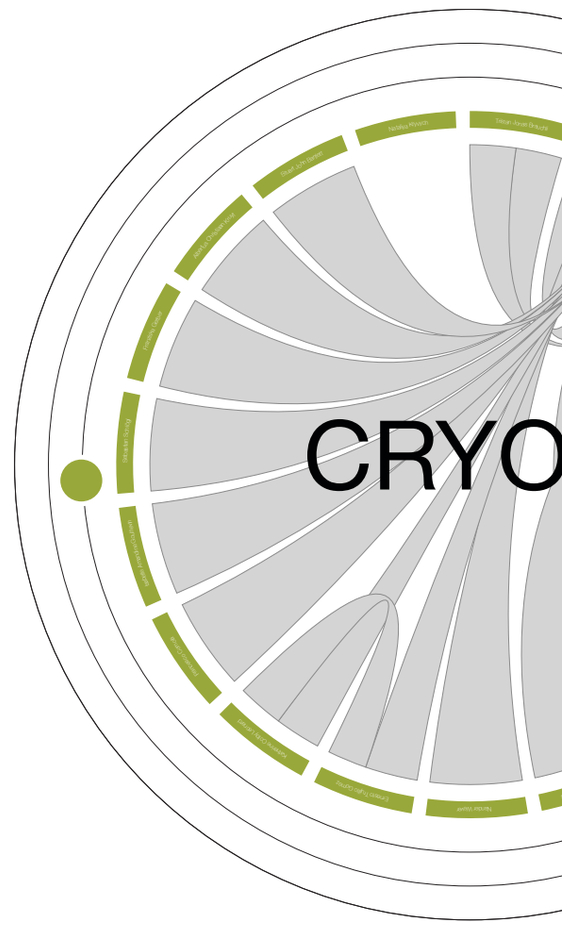
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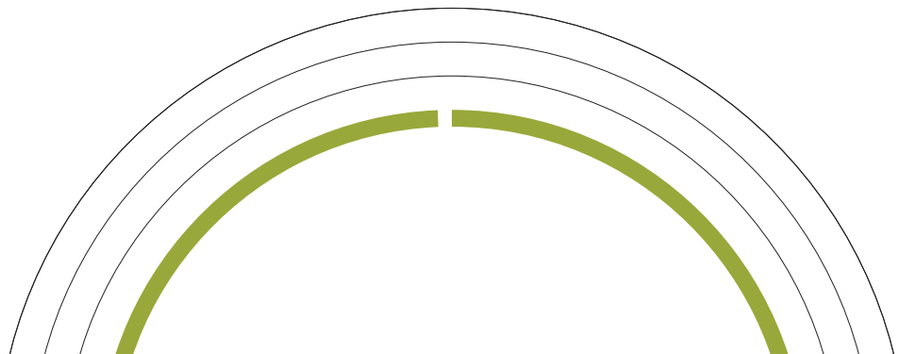

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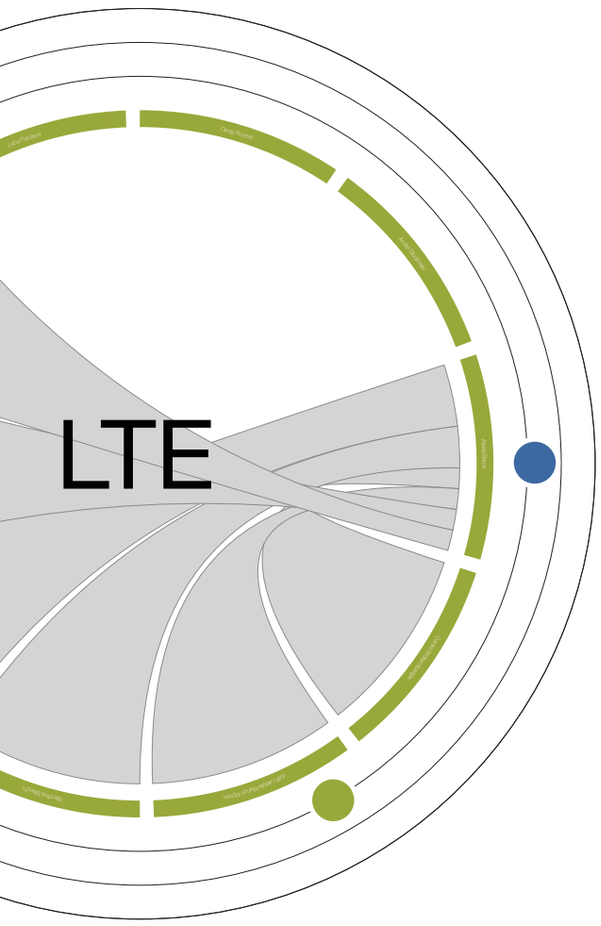
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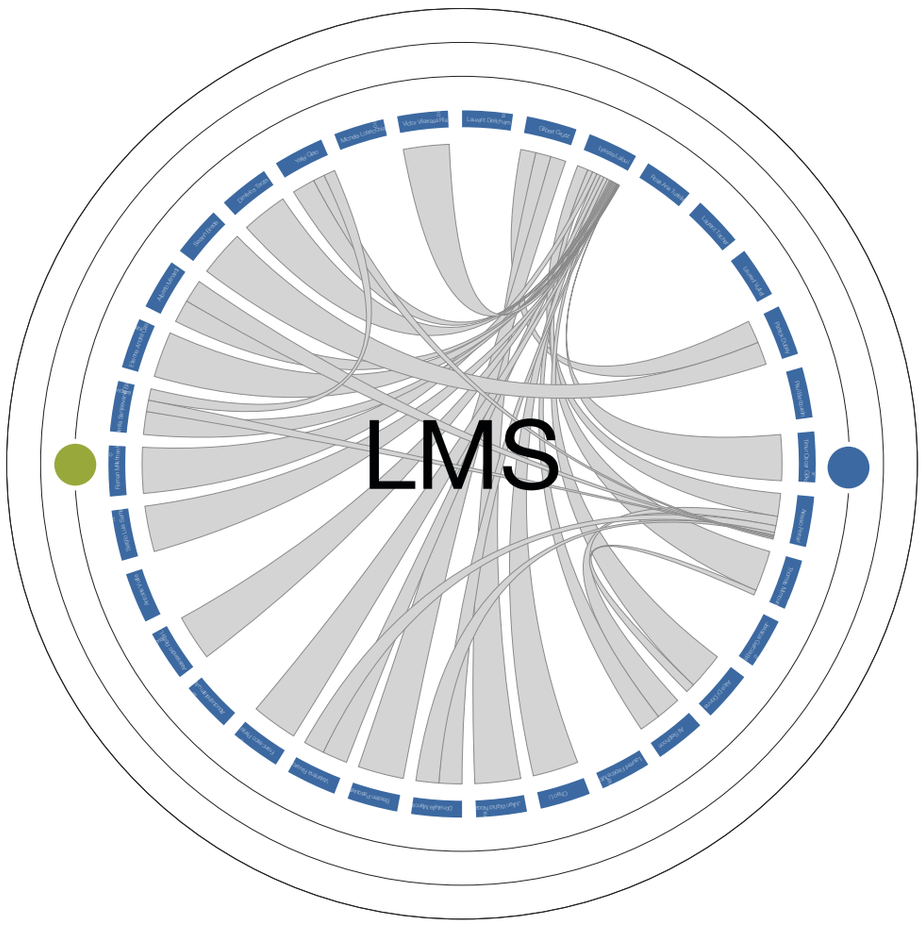
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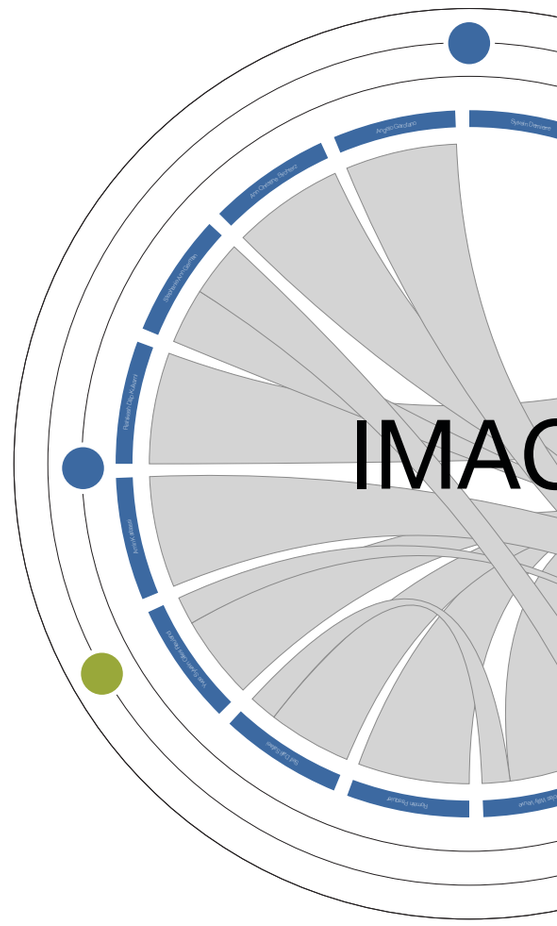
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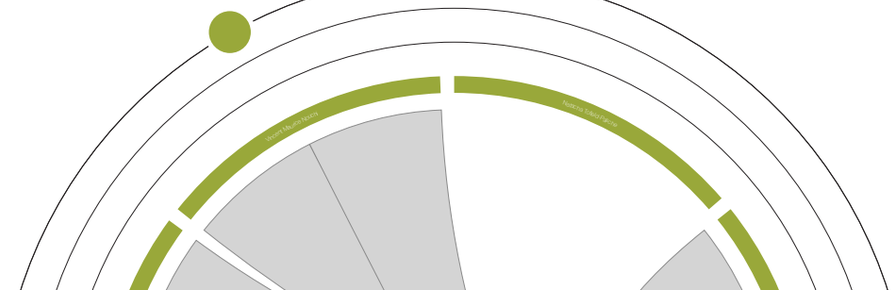

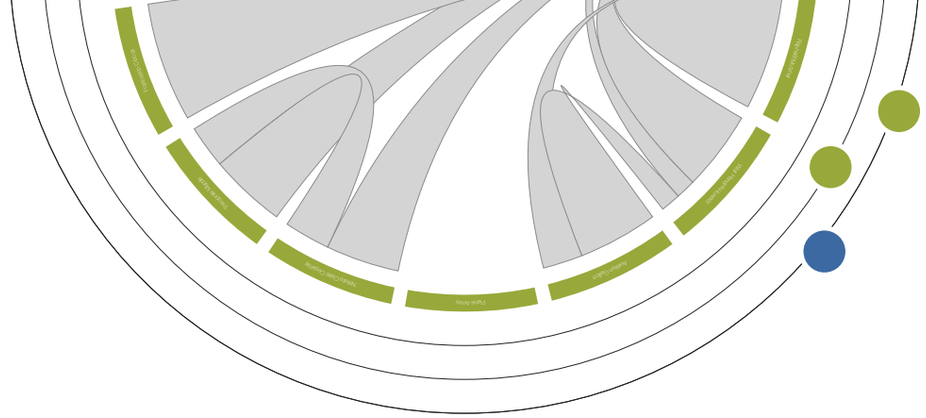

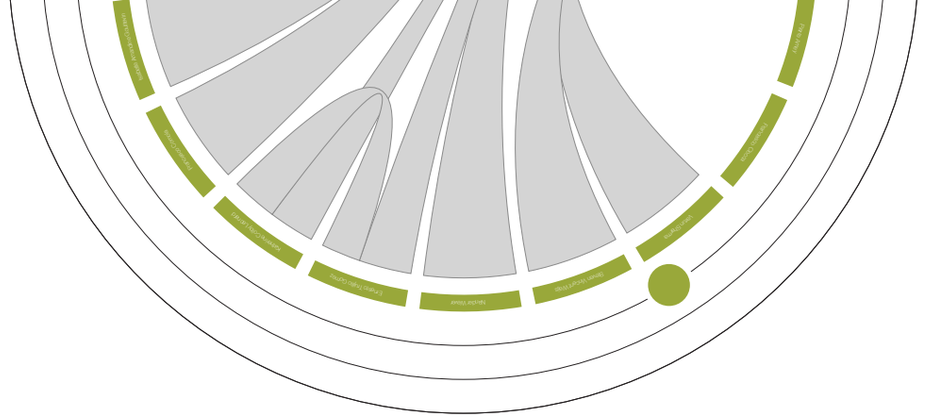

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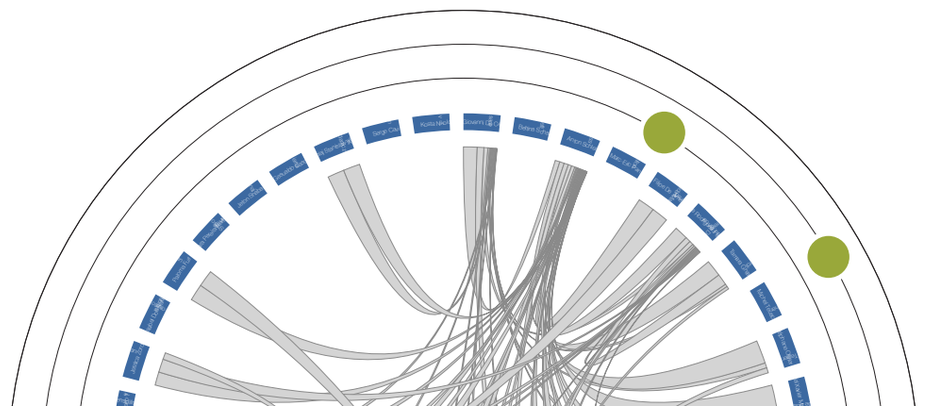
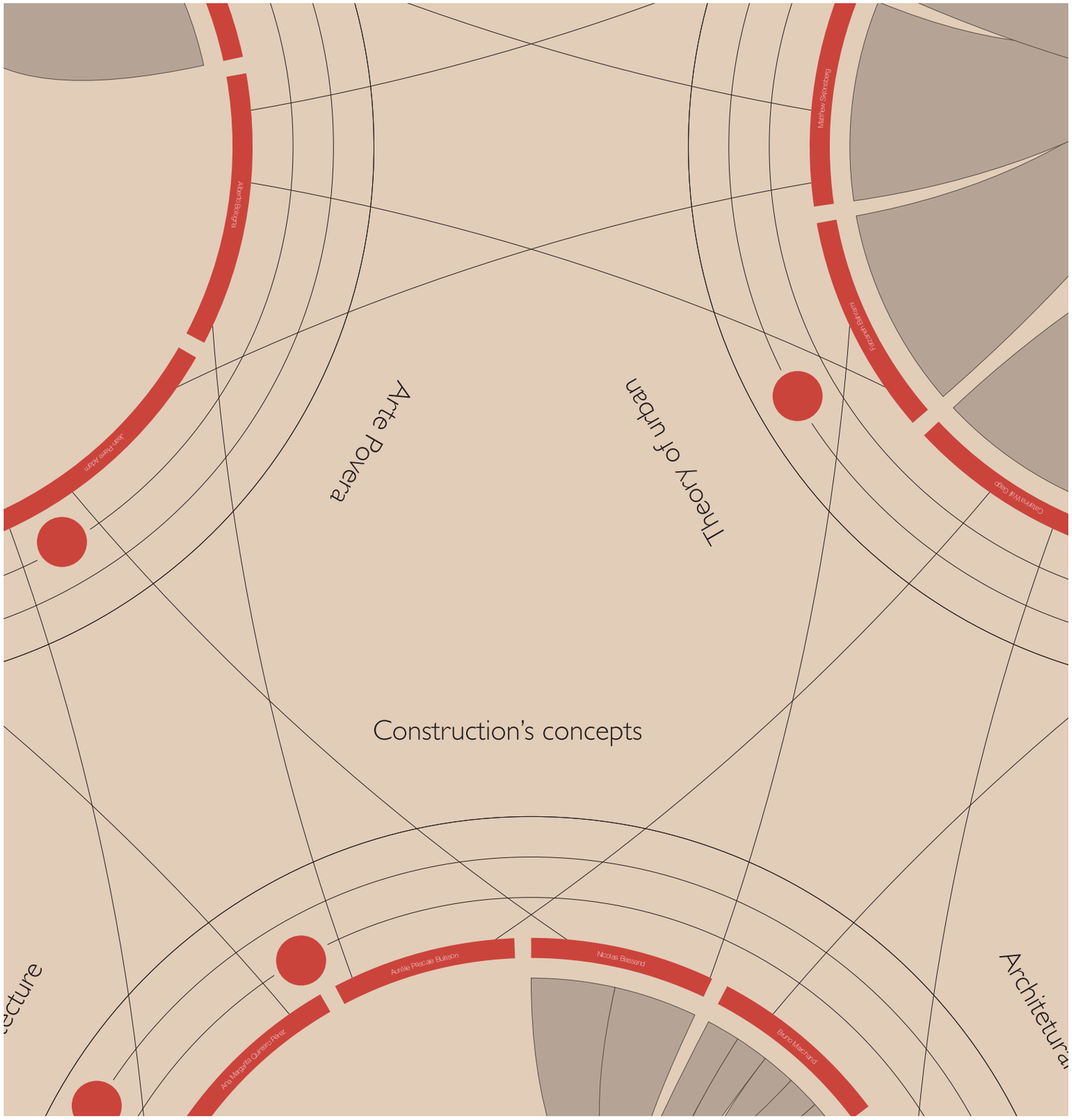
ECHO




Arte Povera
Theory of urban
Construction's concepts
Architetura
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Alberto Bologna
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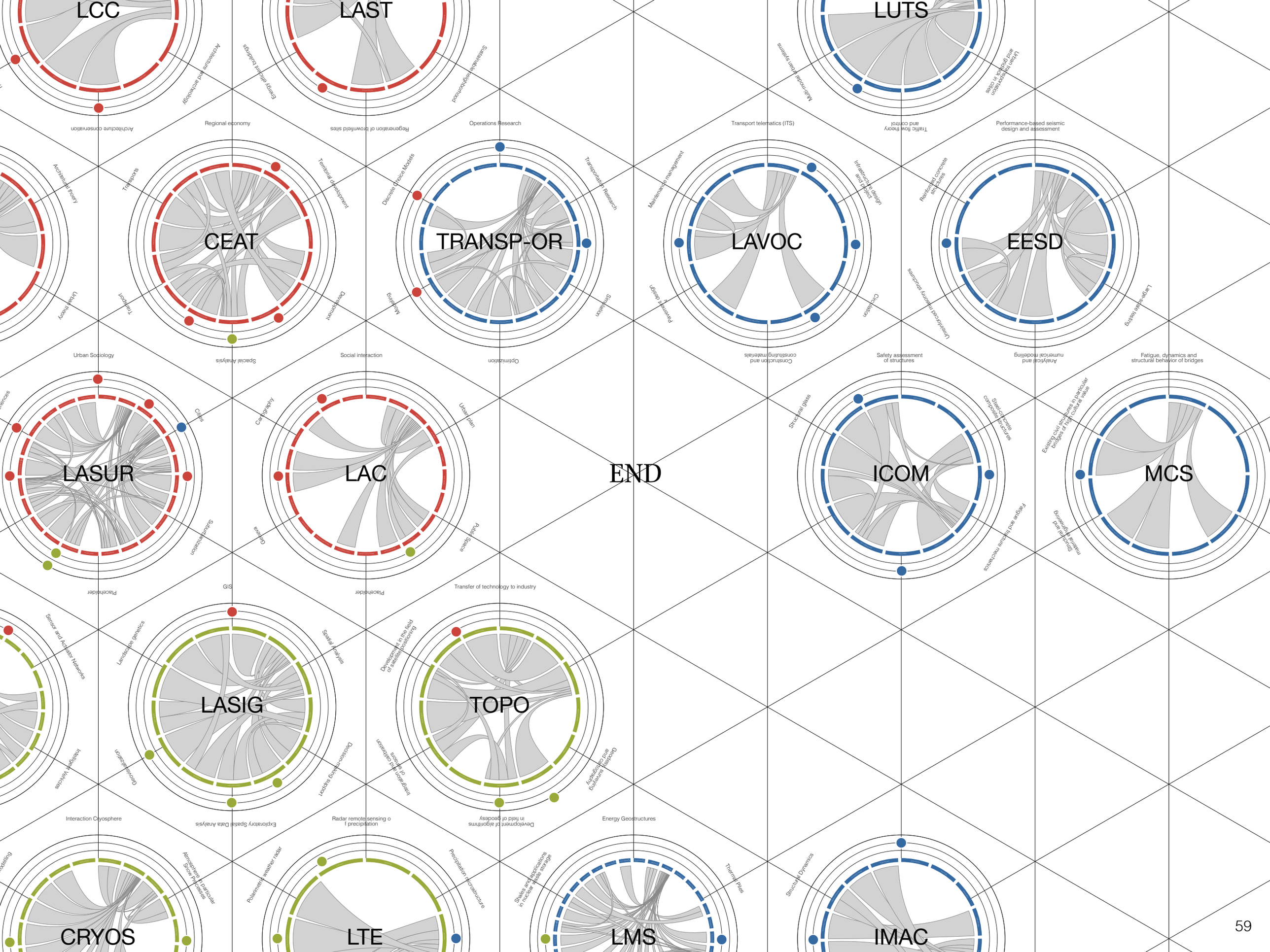
Matthew Skjonsberg
Fernando Bonanni
Catarina Wall Gaap
Aurélie Pascale Buisson
Nicolas Bassand
Bruno Marchand
Ana Margarita Quintero Pérez

The Map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TRANSP-OR
LAVOC
EESD
LASUR
LAC
END
ICOM
MCS
LASIG
TOPO
CRYOS
LTE
LMS
IMAC
Architecture conservation
Regional economy
Regeneration of brownfield sites
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Traffic flow theory and control
Performance-based seismic design and assessment
Urban Sociology
Spacial Analysis
Social interaction
Optimization
Construction and constituting materials
Safety assessment of structures
Analytical and numerical modelling
Fatigue, dynamics and structural behavior of bridges
Placeholder
GIS
Placeholder
Transfer of technology to industry
Interaction Cryosphere
Exploratory Spatial Data Analysis
Radar remote sensing o f precipitation
Development of algorithms in field of geodesy
Energy Geostructures