Average weekday Power consumption for building (1 year of data)
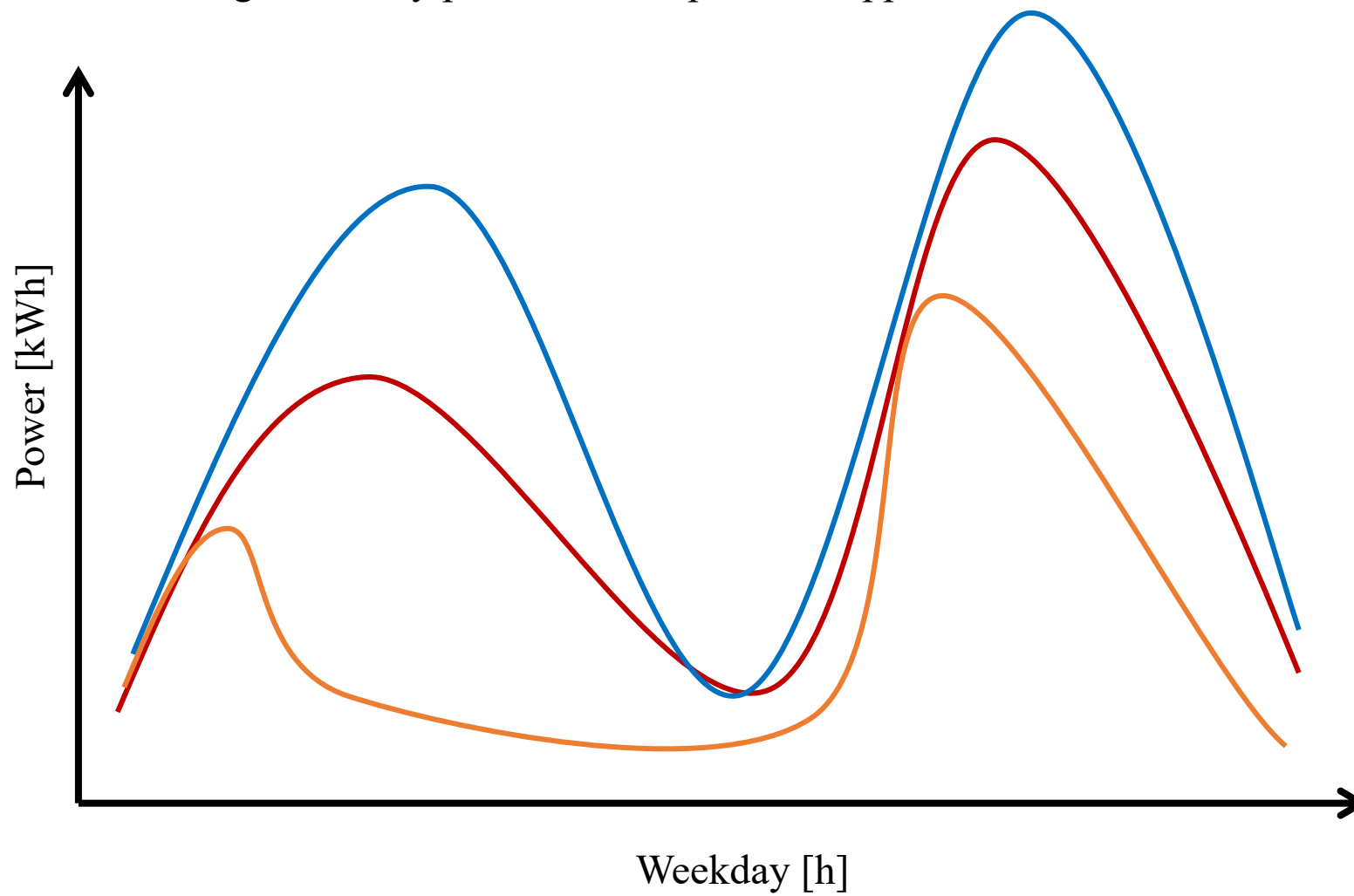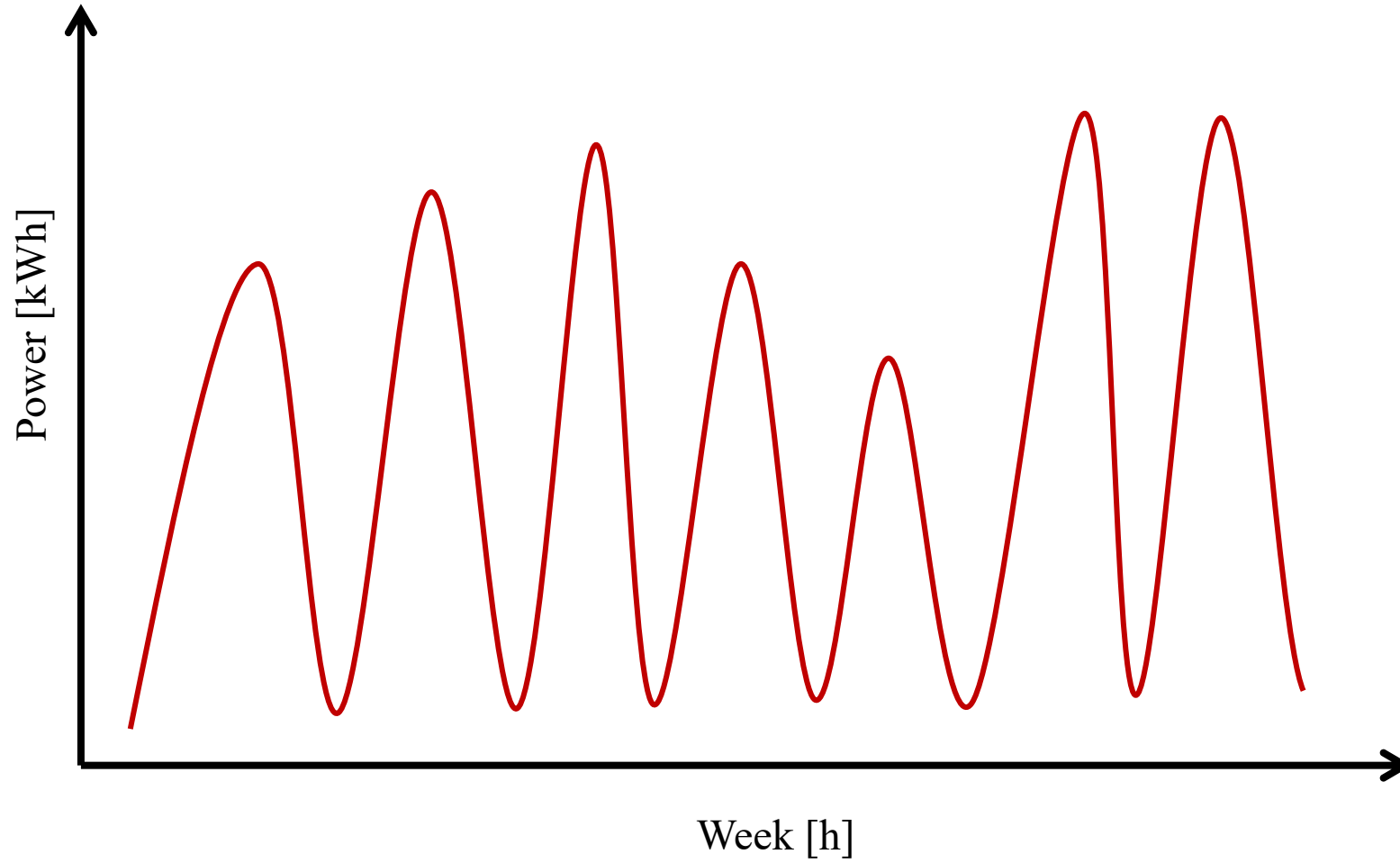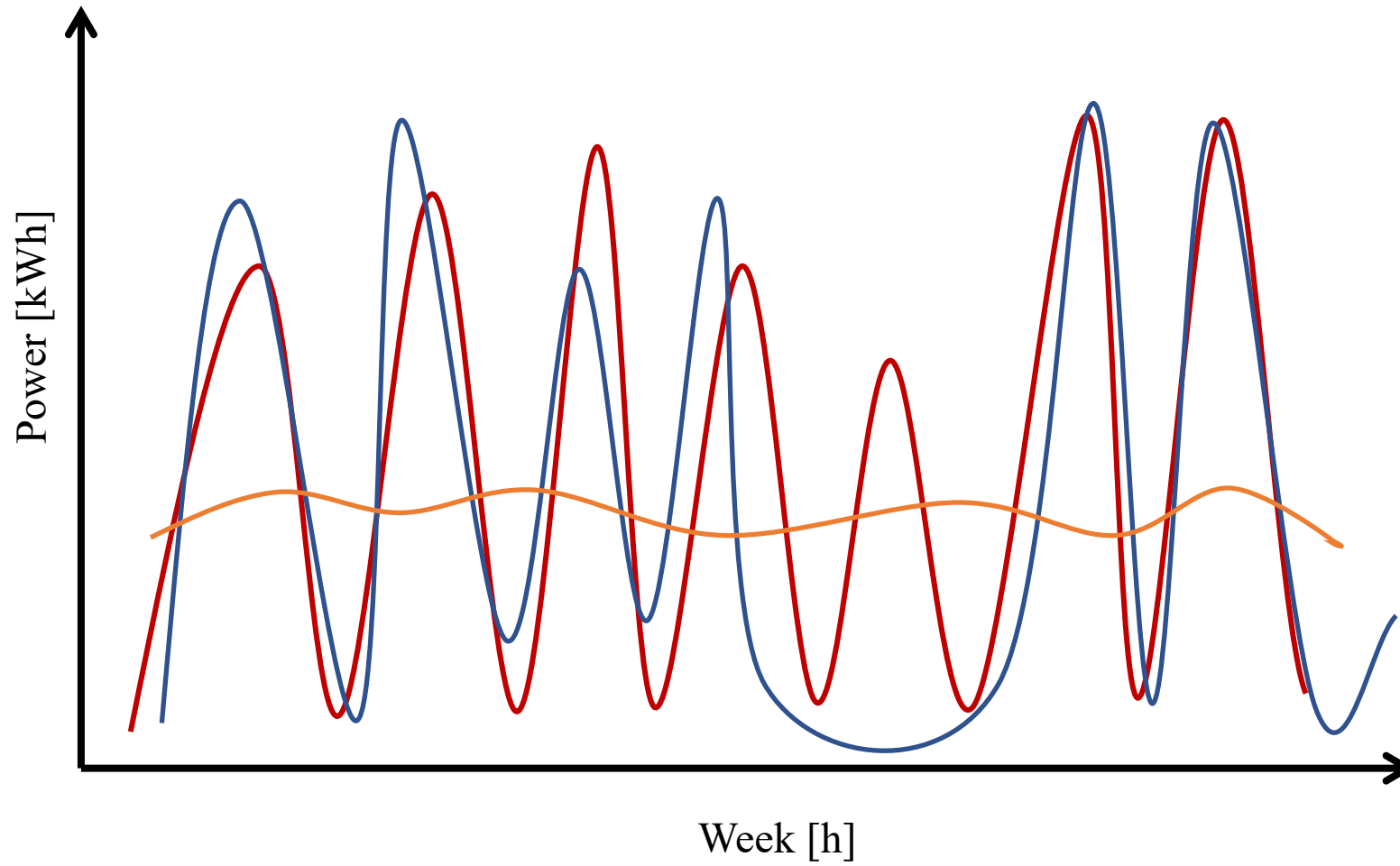
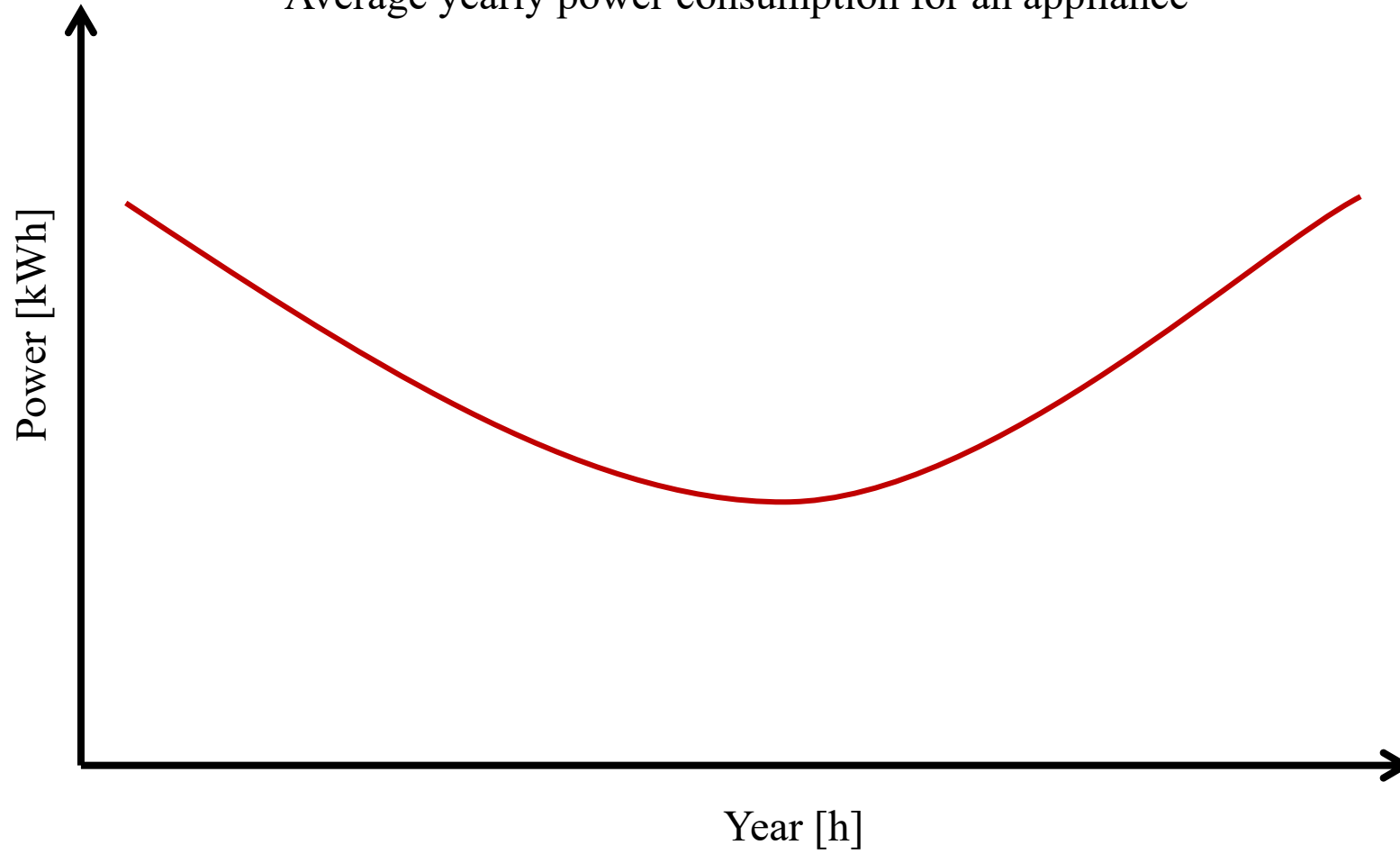Average weekday power consumption for appliances A, B and C
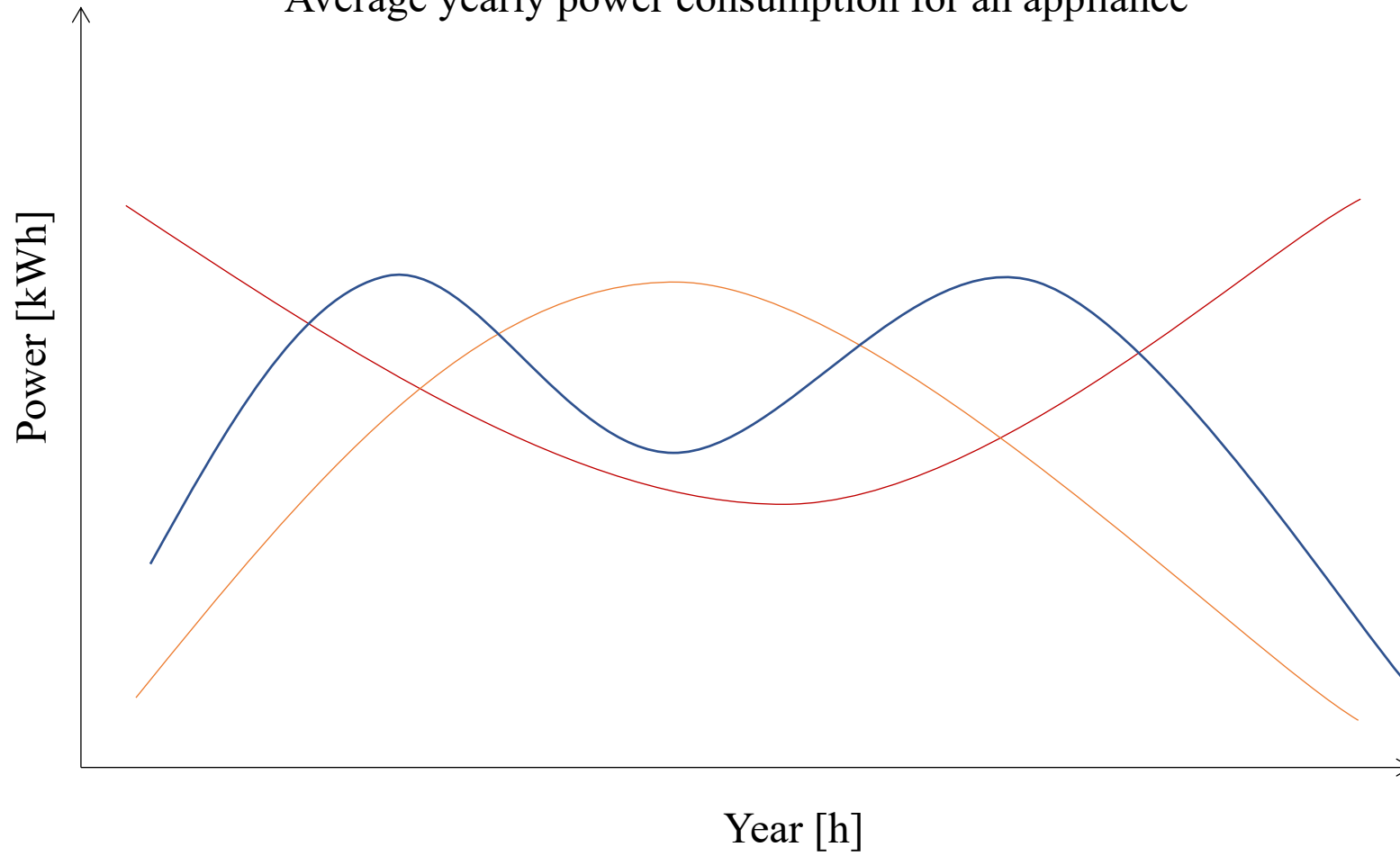
Average weekly Power consumption for appliance

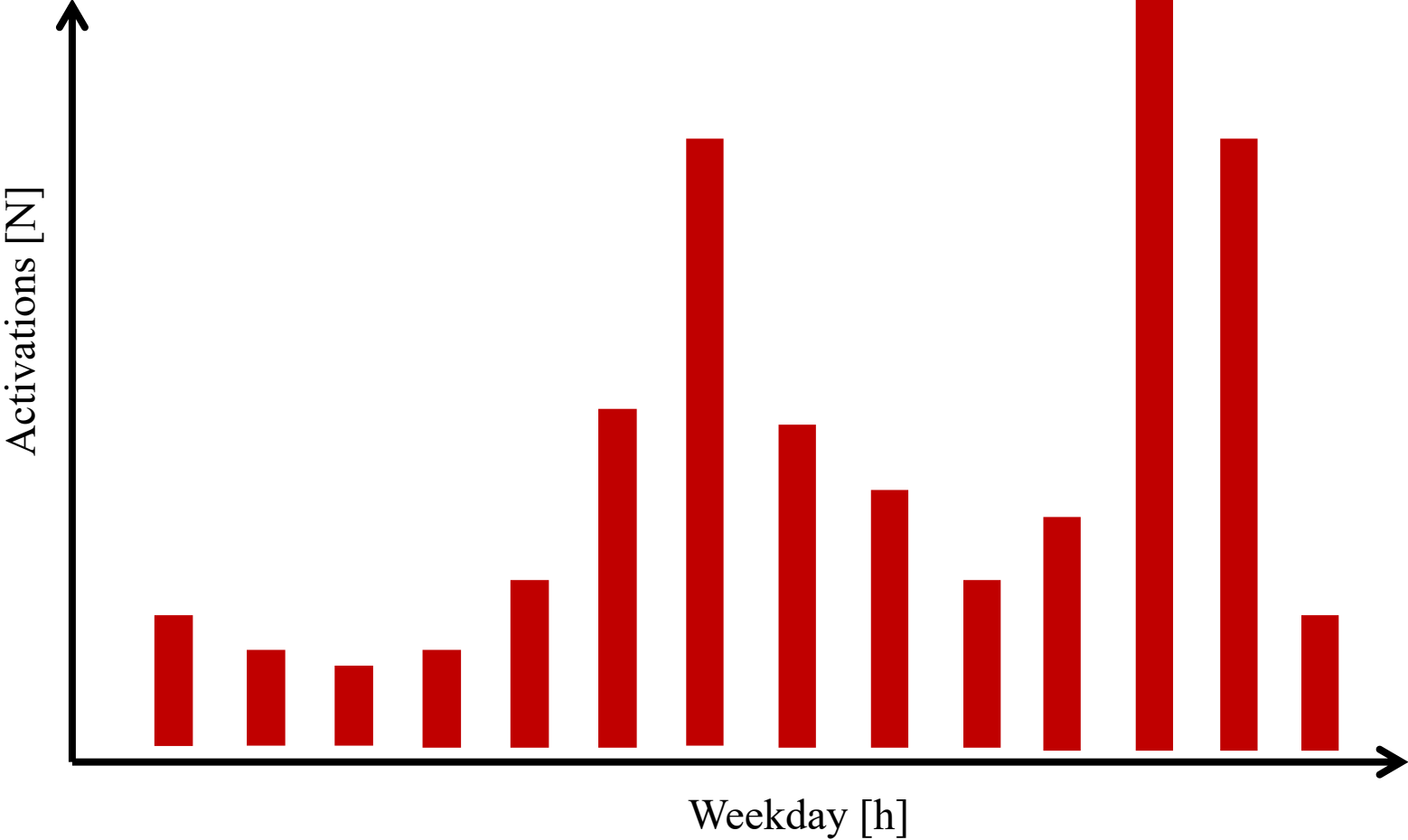Average weekly Power consumption for appliance

Average yearly power consumption for an appliance

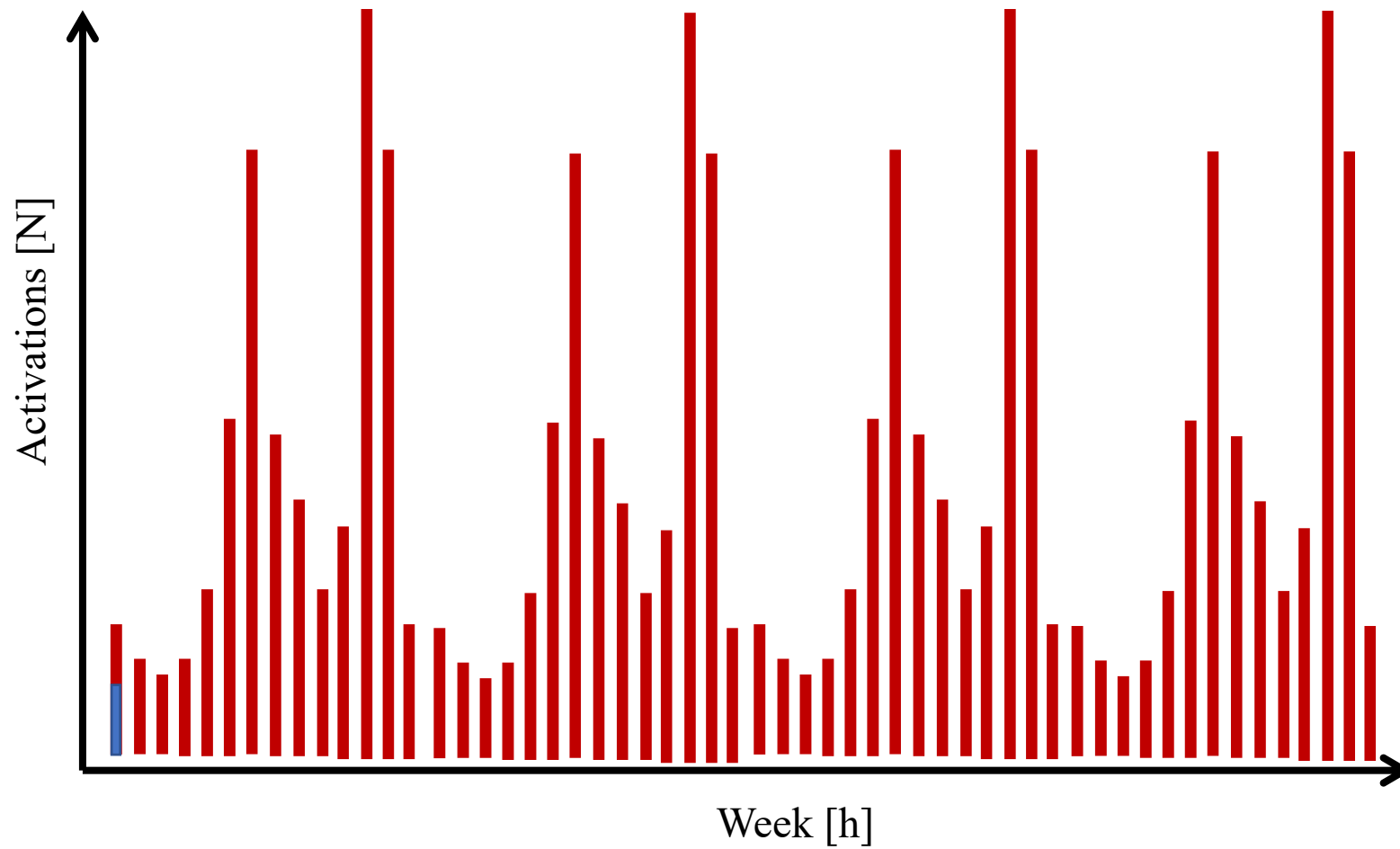Average yearly power consumption for an appliance

Daily activations for appliance A

Weekly activations for appliance A

Weekly activations for appliance A

Yearly activations for appliance A

Yearly activations for appliance A
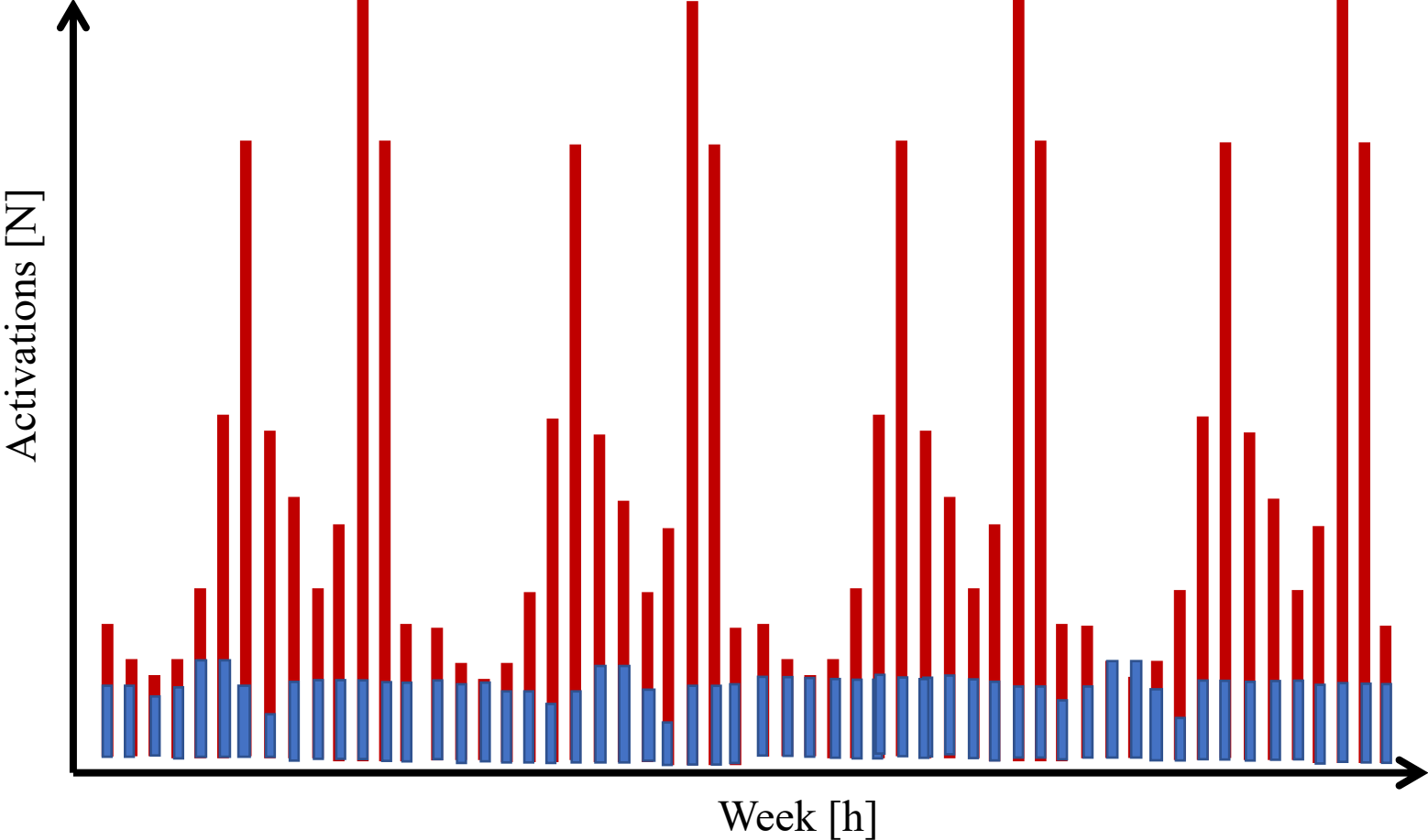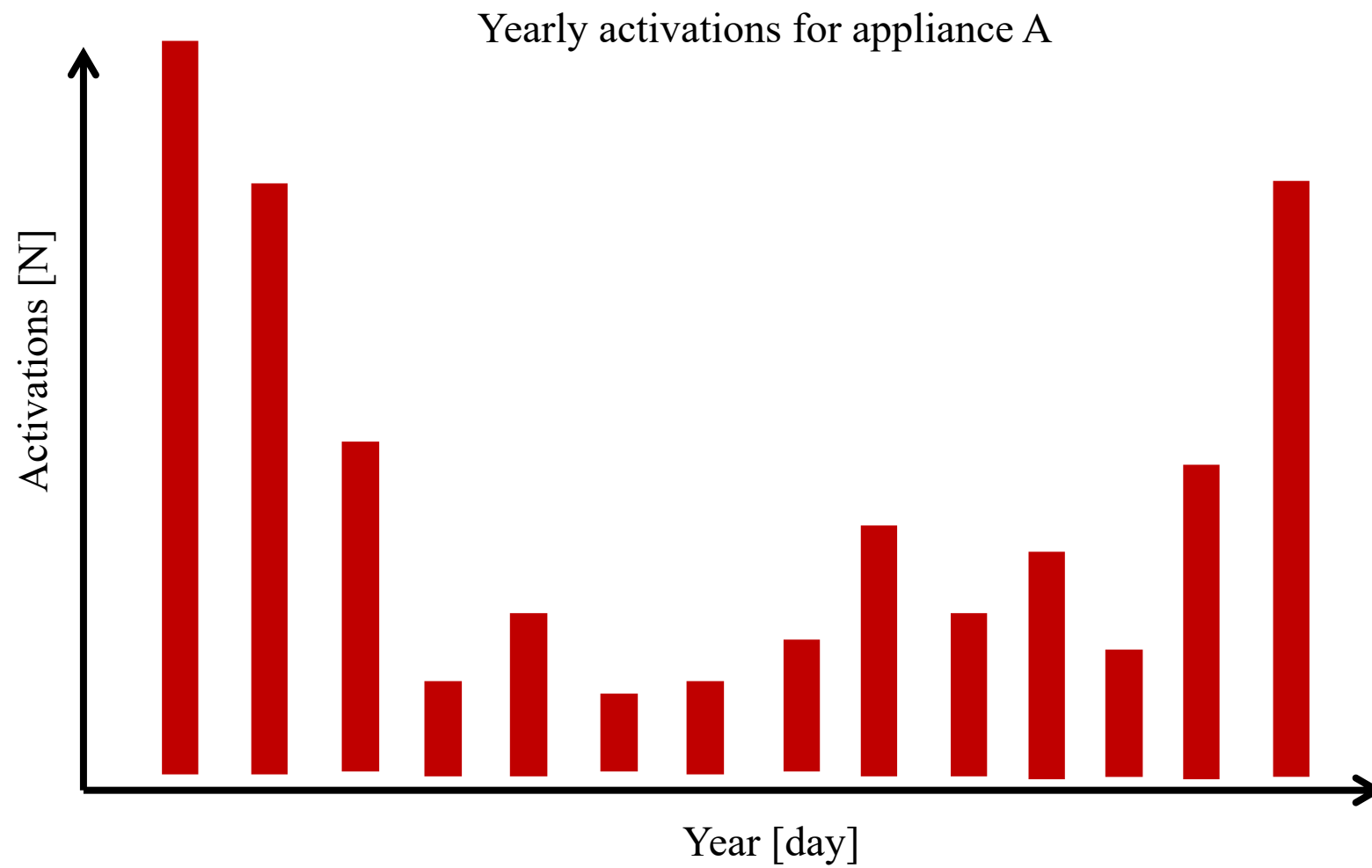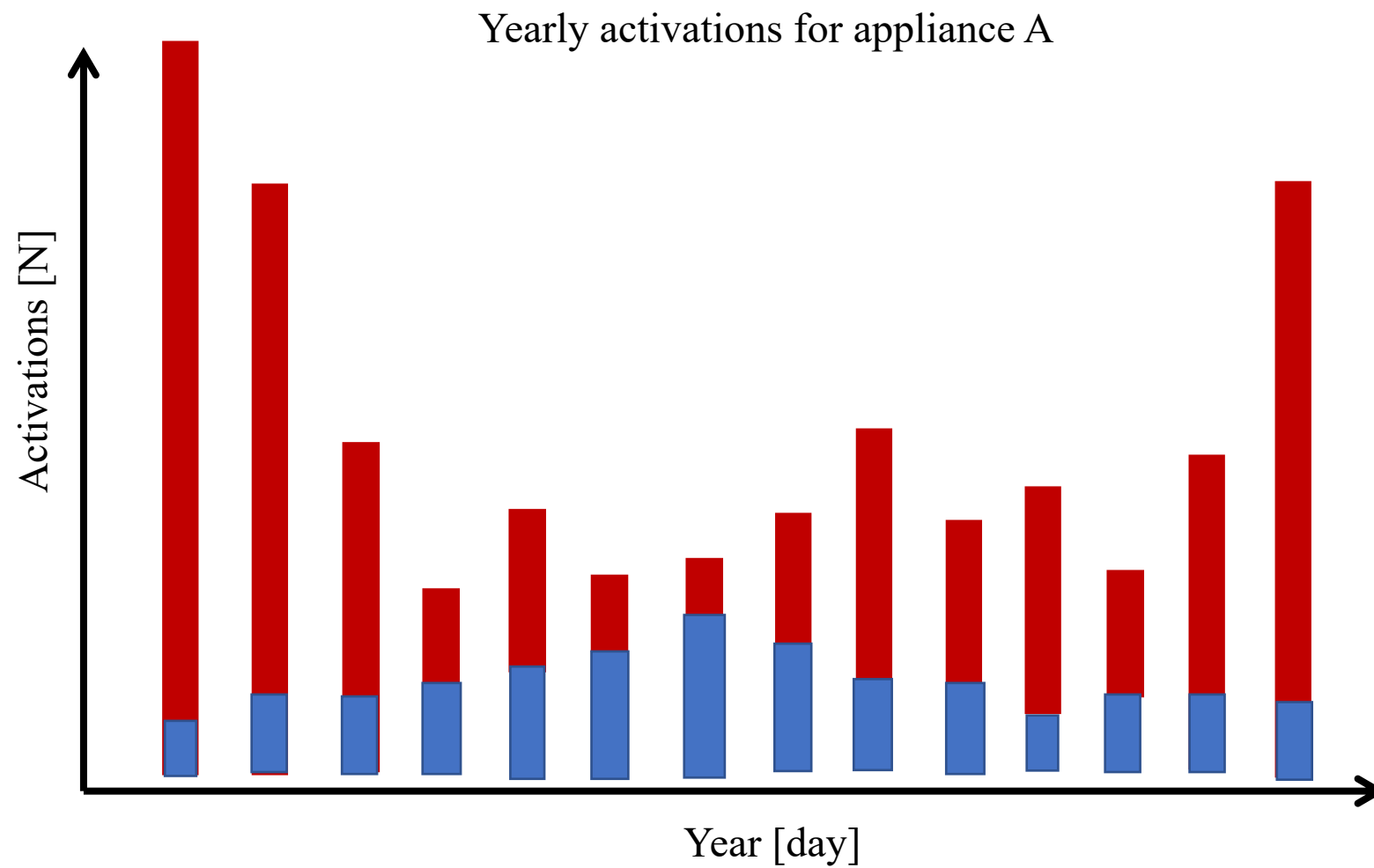
Daily Activations for appliance A and B

Number of activations of appliances in one year period
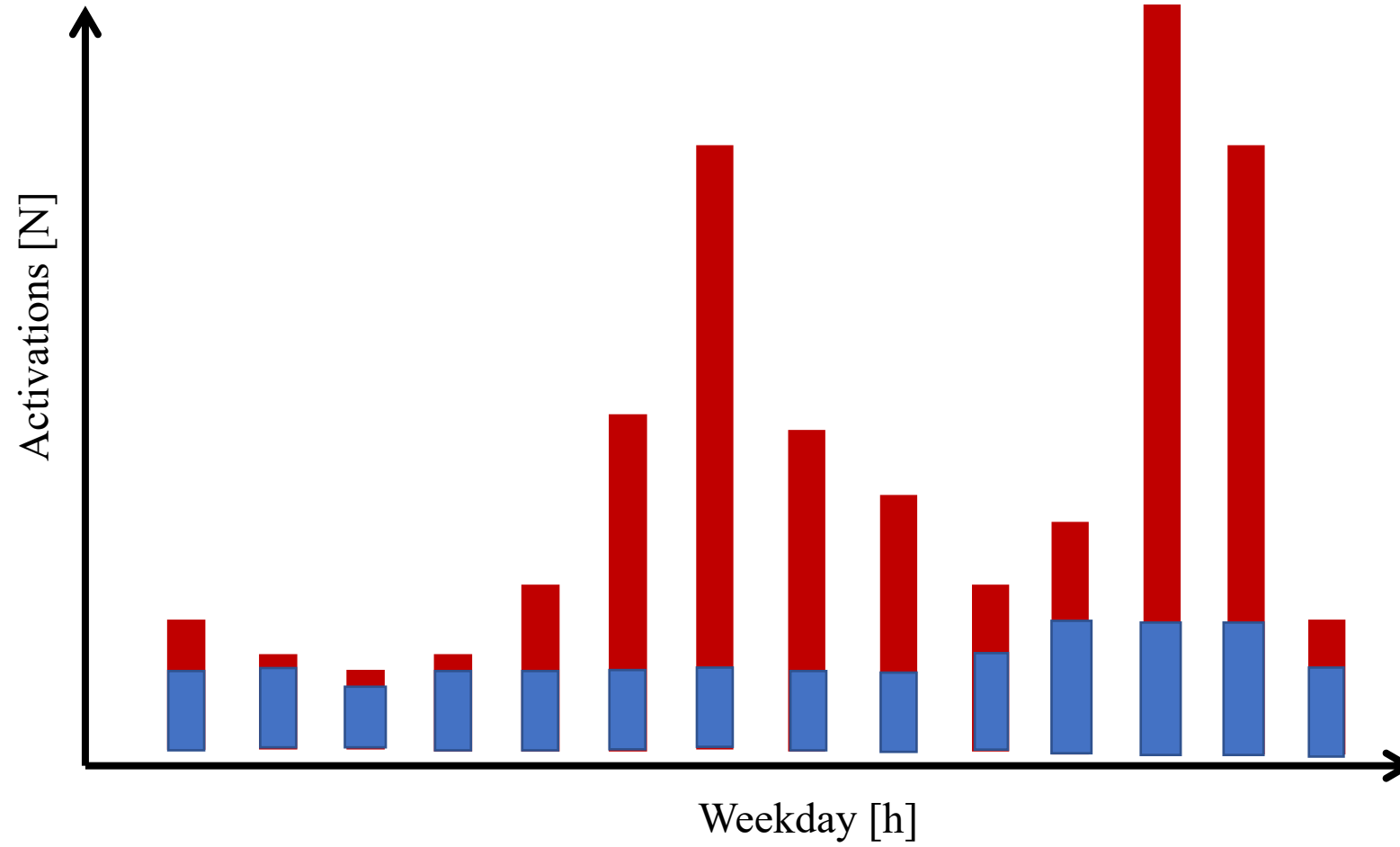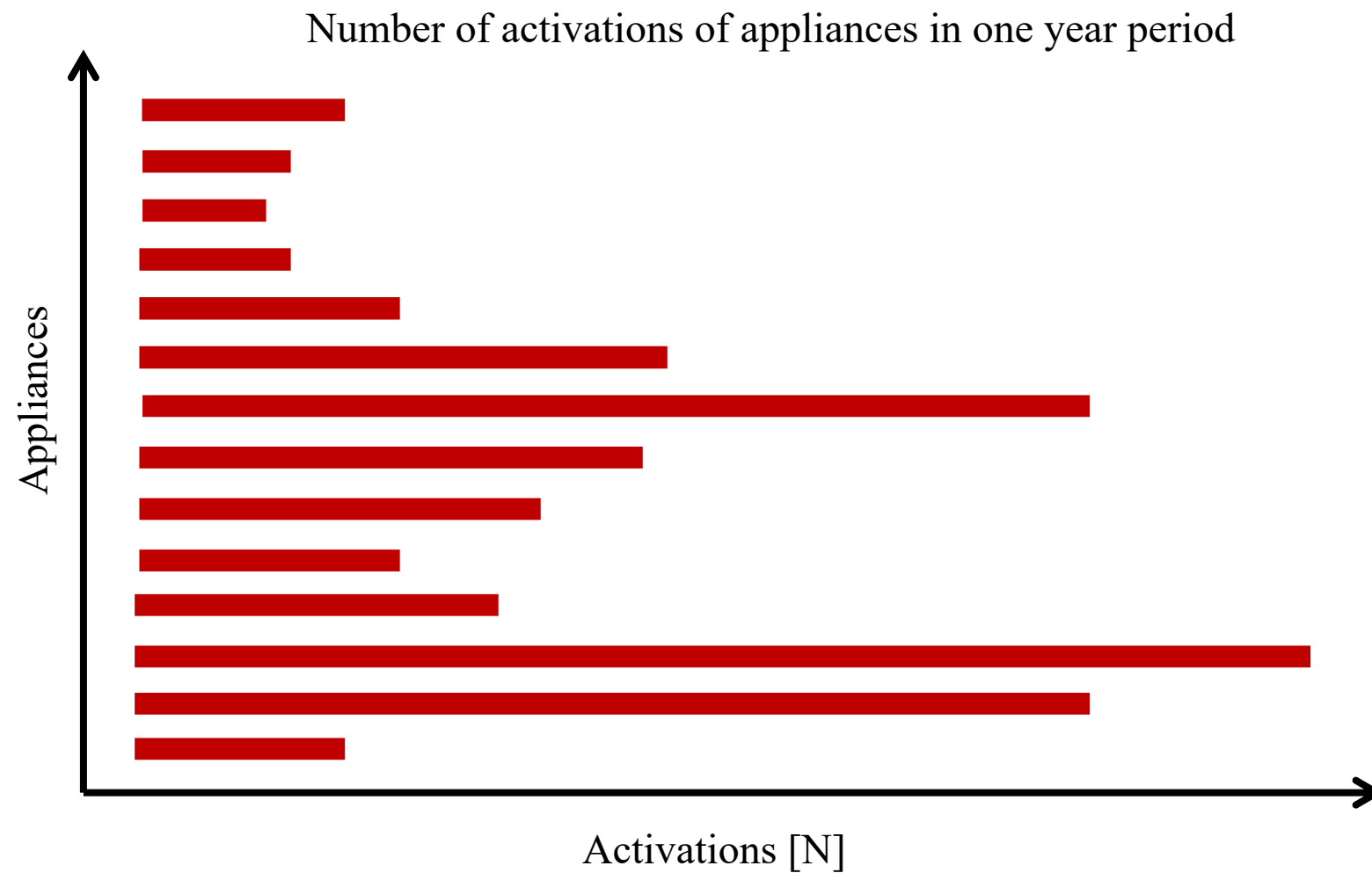
weekday [h]

month [days]

Number of daily activations / power consumption p of appliances in one year period
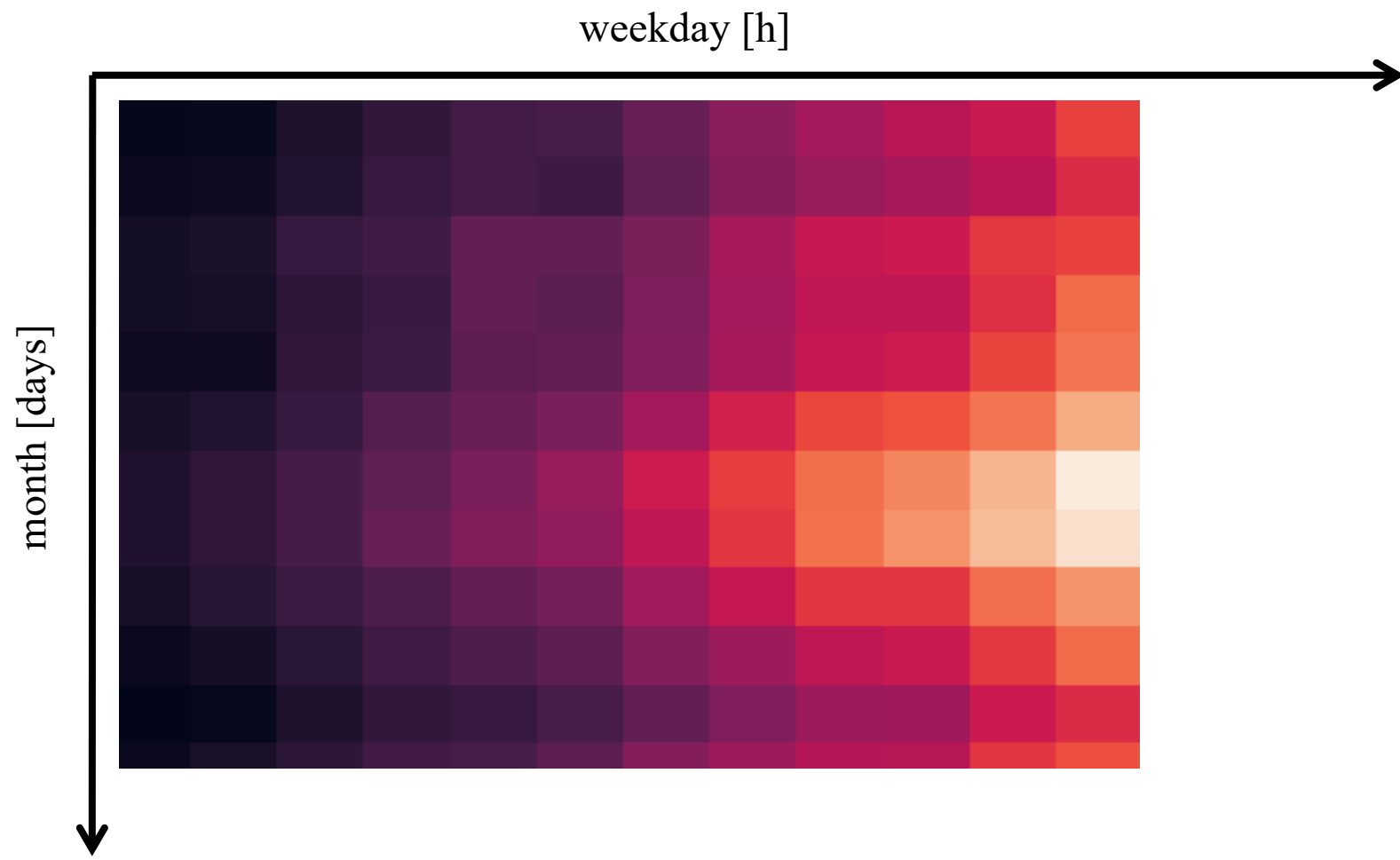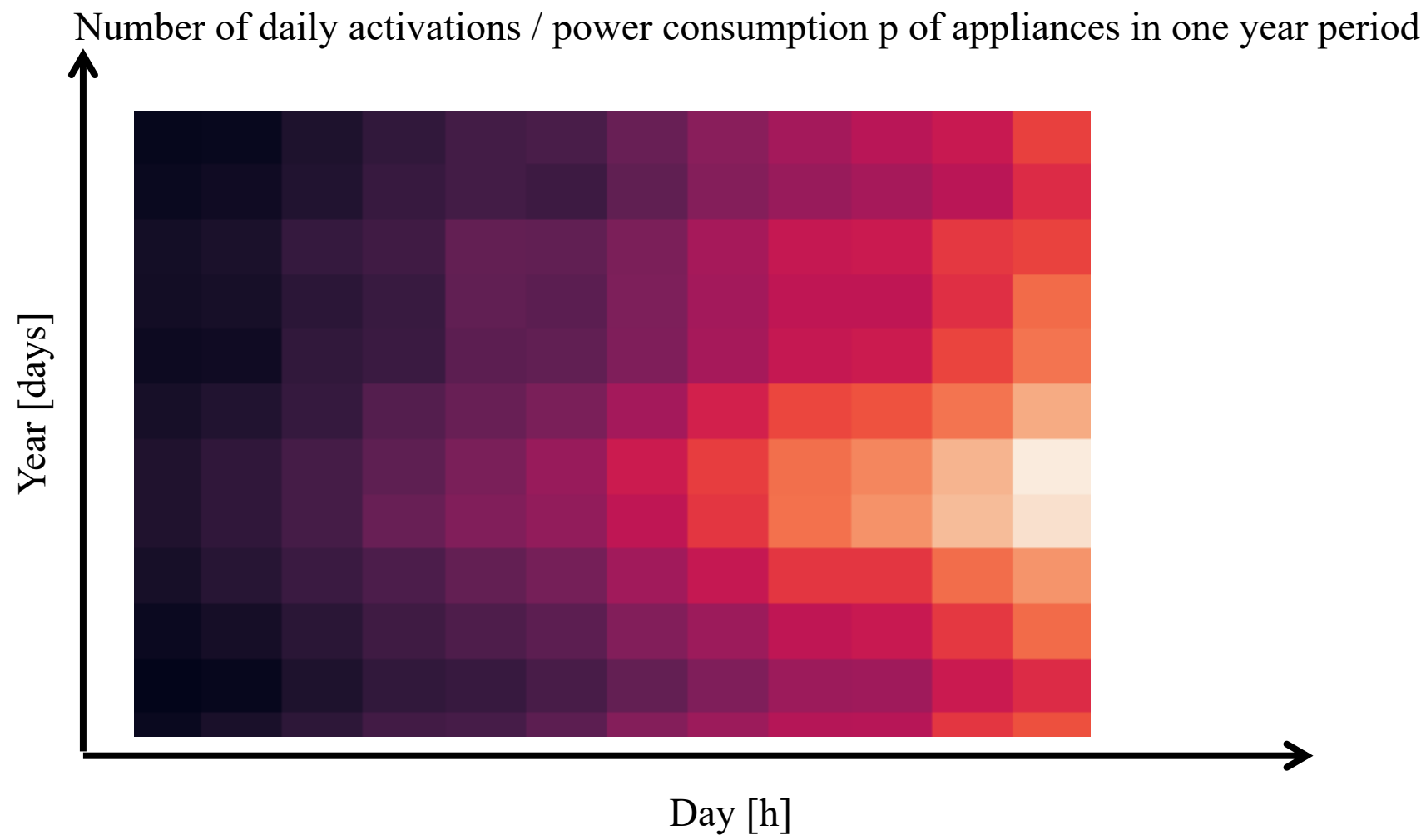
Number of activations / power consumption for each appliance in one month period

Des	Per-house load profile				Per-appliance load profile				Per-house load profile But split per-applaince			
	Profile in range X		Profile and 2D time		Profile in range X		Profile and 2D time		Profile in range X		Appliance activations in range X	
	P	A	P	A	P	A	P	A	P	A	P	A
Daily	y		y		y	y			y			
Weekly/ Monthly	y				(y)							
Yearly	y		x	x	(y)		x	x				

Des	Per-house load profile				Per-appliance load profile				Per-house load profile But split per-applaince			
	Profile in range X		Profile and 2D time		Profile in range X		Profile and 2D time		Profile in range X		Appliance activations in range X	
	P	A	P	A	P	A	P	A	P	A	P	A
Daily	ES,GM		ES,GM		Y ES,GM ,AD,EC	y			EC,AD		[not a profile]	
Weekly/ Monthly	ES,GM		ES,GM		(y)							
Yearly	ES,GM		ES,GM	x	(y)		x	x				

Energy saving
Grid management

Elderly care
Anomaly detection

Other

Des	Per-house load profile				Per-appliance load profile				Per-house load profile But split per-applaince			
	Profile in range X		Profile and 2D time		Profile in range X		Profile and 2D time		Profile in range X		Appliance usage in range X	
	P	A	P	A	P	A	P	A	P	A	P	A
Daily	ES,GM	ES,GM	ES,GM	ES,GM	ES,GM ,AD,EC	ES,GM ,AD,EC	ES,GM ,AD,EC	ES,GM ,AD,EC	ES,AD EC,GM	ES,AD EC,GM	ES,AD EC,GM	ES,AD EC,GM
Weekly/ Monthly	ES,GM	ES,GM	ES,GM	ES,GM	ES,AD GM	ES,AD GM	ES,AD GM	ES,AD GM	ES,AD, GM	WES,AD MGM	ES,AD GM	ES,AD GM
Yearly	ES,GM	ES,GM	x	x	ES,AD GM	ES,AD GM	x	x	ES,AD GM	ES,AD GM	ES,AD GM	ES,AD GM

Energy saving
Grid management

Elderly care
Anomaly detection

Other

Des	Per-house load profile				Per-appliance load profile				Per-house load profile But split per-applaince			
	Profile in range X		Profile and 2D time		Profile in range X		Profile and 2D time		Profile in range X		Appliance usage in range X	
	P	A	P	A	P	A	P	A	P	A	P	A
Daily	III	II	III	III	III	III	III	III	III	III	III	III
Weekly/ Monthly	III	II	I	I	III	III	I	I	II	II	II	II
Yearly	III	I	X	X	II	II	X	X	I	I	II	II

Energy saving
Grid management

Elderly care
Anomaly detection
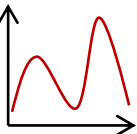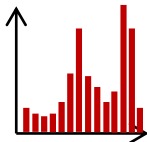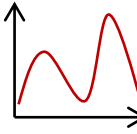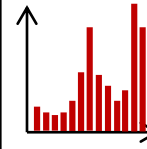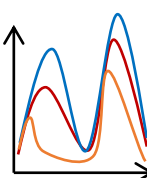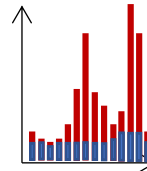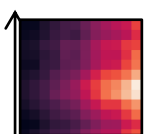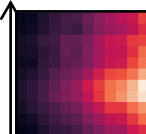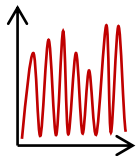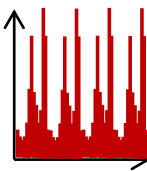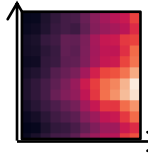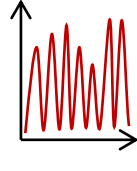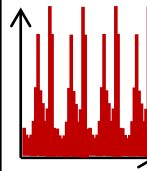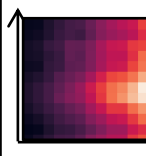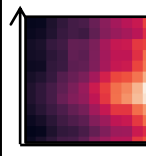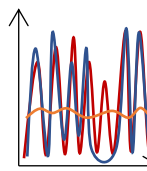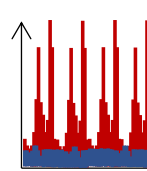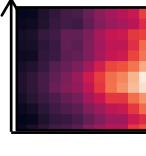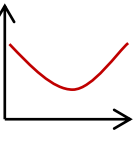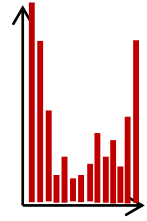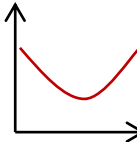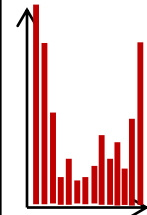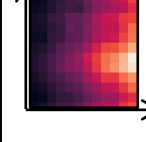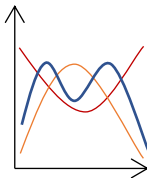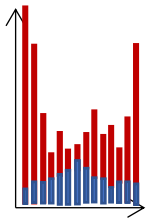
Other

| Des2 | Per-house load profile | | | | Per-appliance load profile | | | | Per-house load profile But split per-applaince | | | |
| | Profile in range X | | Profile and 2D time | | Profile in range X | | Profile and 2D time | | Profile in range X | | Appliance usage in range X | |
	P	A	P	A	P	A	P	A	P	A	P	A
Daily	X	2	X	1	X	X	1	1	X	1	1	1
Weekly/ Monthly	X	2	X	X	1	1	X	X	X	2	2	2
Yearly	X	X	X	X	2	2	X	X	X	X	2	2

Energy saving
Grid management

Elderly care
Anomaly detection

Other

P – power A - activation	Per-house				per-applaince				Per house – per appliance			
	LP		+ daily time dimension		LP		+ daily time dimension		LP		Appliances Side by side	
Range of time axis	P	A	P	A	P	A	P	A	P	A	P	A
Daily			X	X			X	X				
Weekly/ Monthly												
Yearly												

Non-time-related Appliance-bulding profiles	Per appliance
Operating hours / average on time of an appliance	
Number of activations In building	
Average power consumption	
Share of electricity consumption	
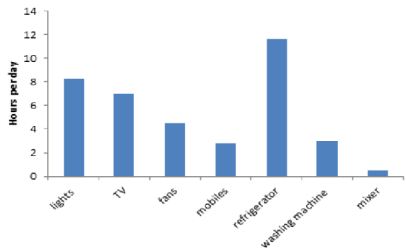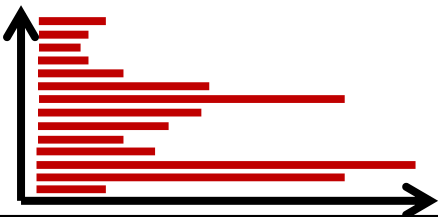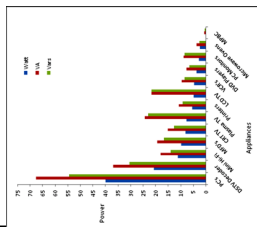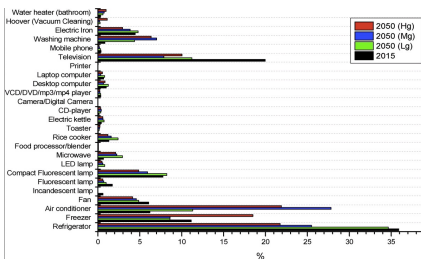
Y X (1Day of data)	appliances	activations	Power	Operating - time	Time turned on	Number of same values
Appliances [firdge,...] (1D)	x	x	x	x	x	y
Activations (time) [21] (0D)	y	x	x	x	y	
Power (time) (1,2,3) (1D)	y	y	x	x	x	exists
Operating-time (12h) (0D)	Exists	X	y	x	x	
Time using (12) (1D)	x	y	Y (2D)	Exists	x	

Time using / time o
Activations / freque

Power usage
Operating time
appiances

Y X (10 Day of data)	frequency	appliances	N activatins	pwr avg	Operating -time
Appliances	y	x	x	x	x
N Activations	x	y	x	y	y
Power(avg)	x	y	y	x	x
Power(arr)	1	x	x	x	x
Power (hist)	y	y	x	x	x
Operating time	X	1	y	y	x
Time arr (1 day)	X	X	1	15	1

Y X (10 Day of data)	frequency	appliances	N activatins	pwr avg	Operating -time
Appliances	y	x	x	x	x
N Activations	x	y	x	y	y
Power(avg)	x	y	y	x	x
Power(arr)	1	x	x	x	x
Power (hist)	y	y	x	x	x
Operating time	X	1	y	y	x
Time arr (1 day)	X	X	1	15	1 (3)

Service 14 and 15

- Activity recognition and forecasting (UC 11)
- Anomalous behaviour detection (UC 11)

- Developing suitable Load profiles that enables one to detect various acti