



Intelligibility as a key success factor in curriculum design

Ir. Aldert Kamp

Director of Education

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Reasons for change

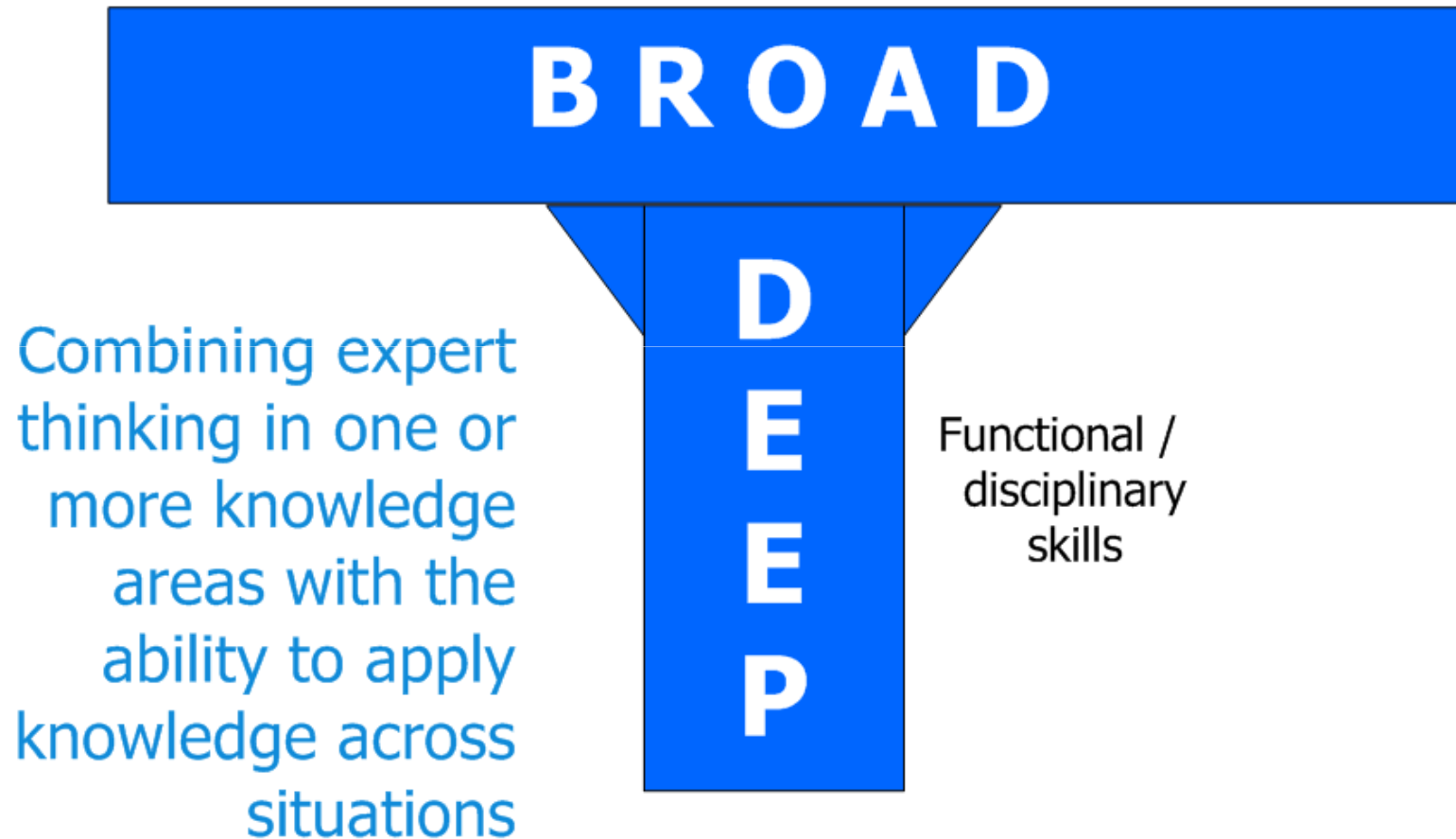
- Bologna Declaration implementation as an artificial split between BSc and MSc (2002)
- Major-Minor split in the BSc, leading to a loss of half a year (2005)
- Deterioration over time
- Engineering education shift to science

Know where to go and how to get there



The reference for our programmes

Ability to apply knowledge across situations



Backbone of the degree programmes

Educating all-round Aerospace Engineers



BSc

BROAD academic background, consolidated knowledge of the domain of aerospace

ENGINEERING

Academic intellectual skills and attitudes to analyse, apply, synthesize, **DESIGN**

Aerospace Engineering specialisation

Professional orientation

Research skills
Intellectual skills

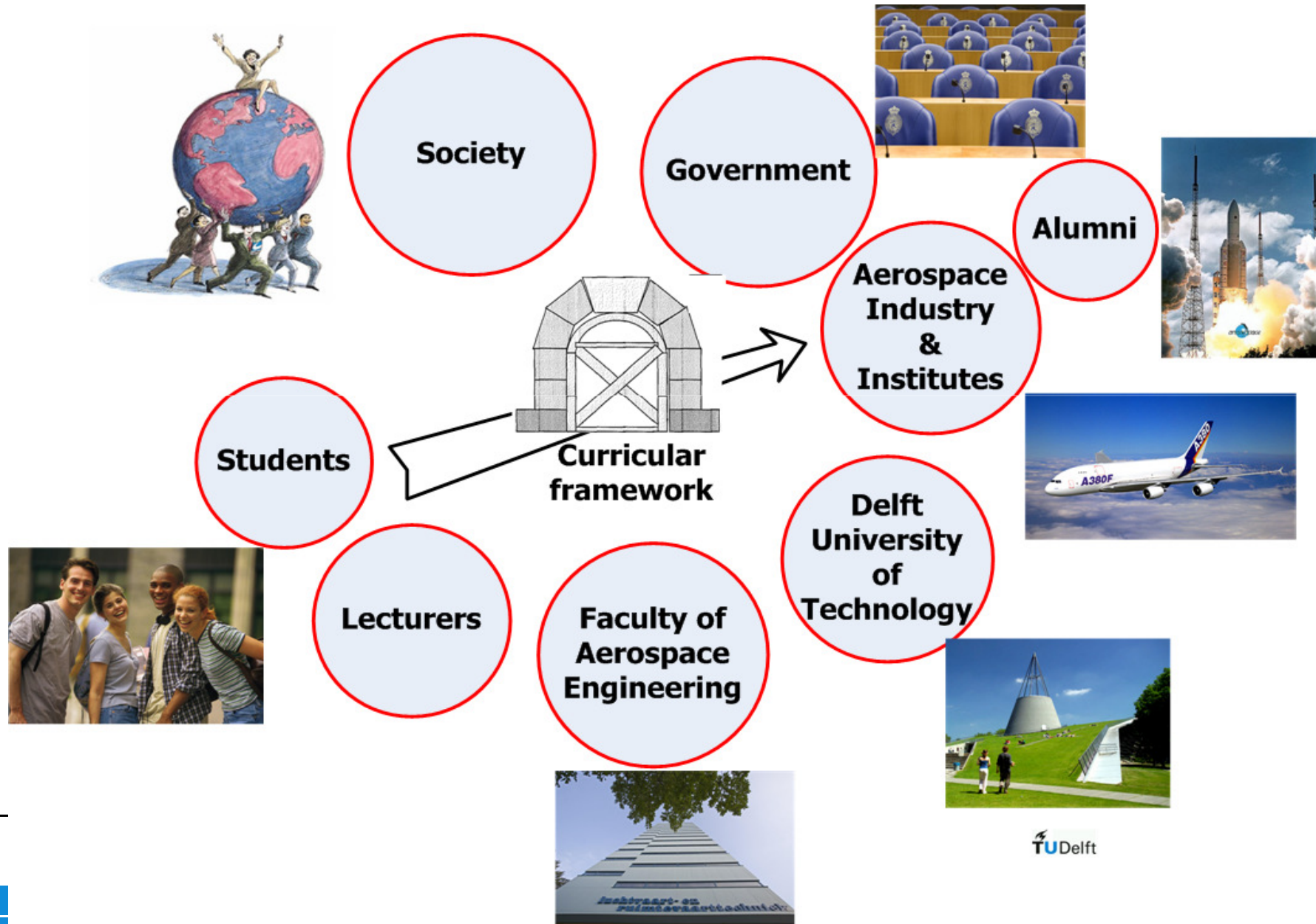
MSc

EXPERT view of aerospace engineering discipline, breadth is MSc Track

Detailed knowledge of one or more subdisciplines

Academic intellectual skills and attitudes to model, analyse, develop, **RESEARCH**, solve

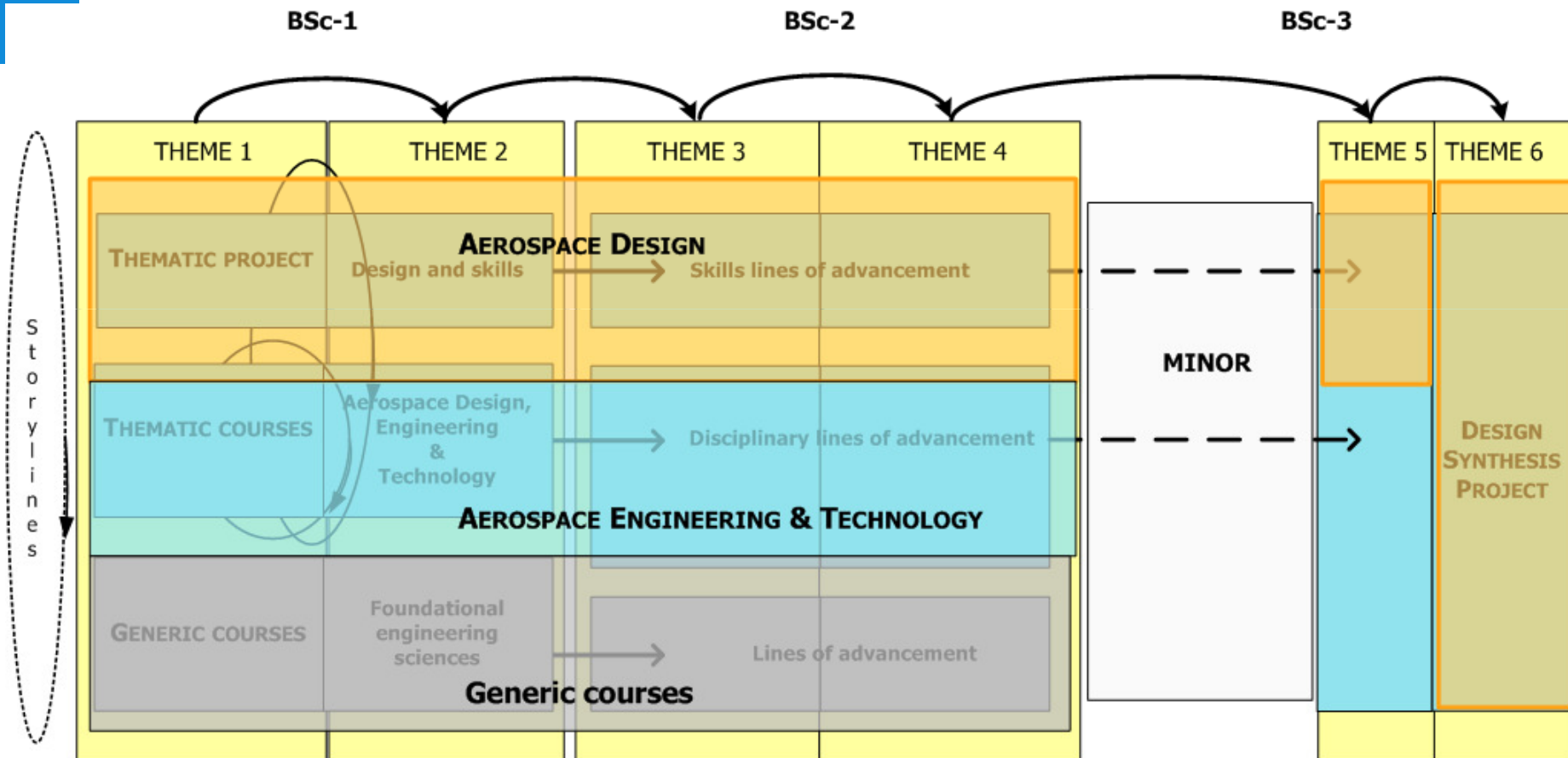
Shaping the framework



Key words of the integrated bachelor

- BALANCED
- STRUCTURE
- INTEGRATIVE
- COMPELLING

A framework with connections



A curriculum with a story

- How one engineers aircraft and spacecraft
 - Focus on:
 - the aircraft and spacecraft engineering and technology
 - the professional roles and activities of aerospace engineers
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- Enjoy the thrill of the profession of an aerospace engineer

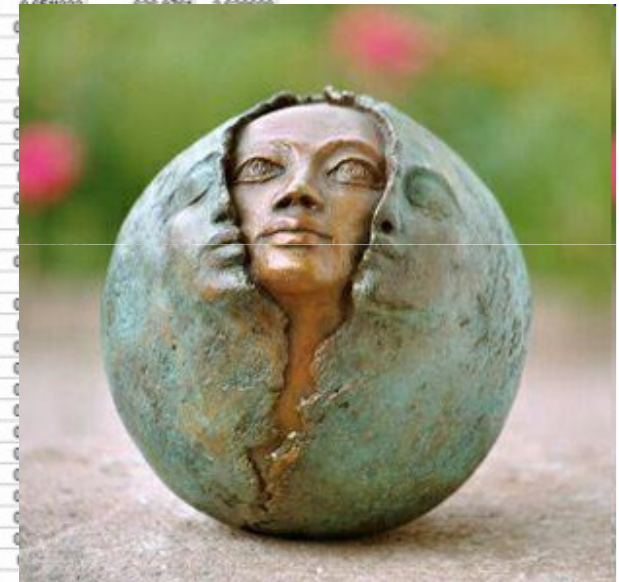
A compelling curriculum

- Promote the intrinsic motivation of students
 - Challenge
 - Curiosity
 - Control
 - Fantasy
 - Competition
 - Cooperation
 - Recognition
- (taxonomy of Malone & Lepper, 1987)



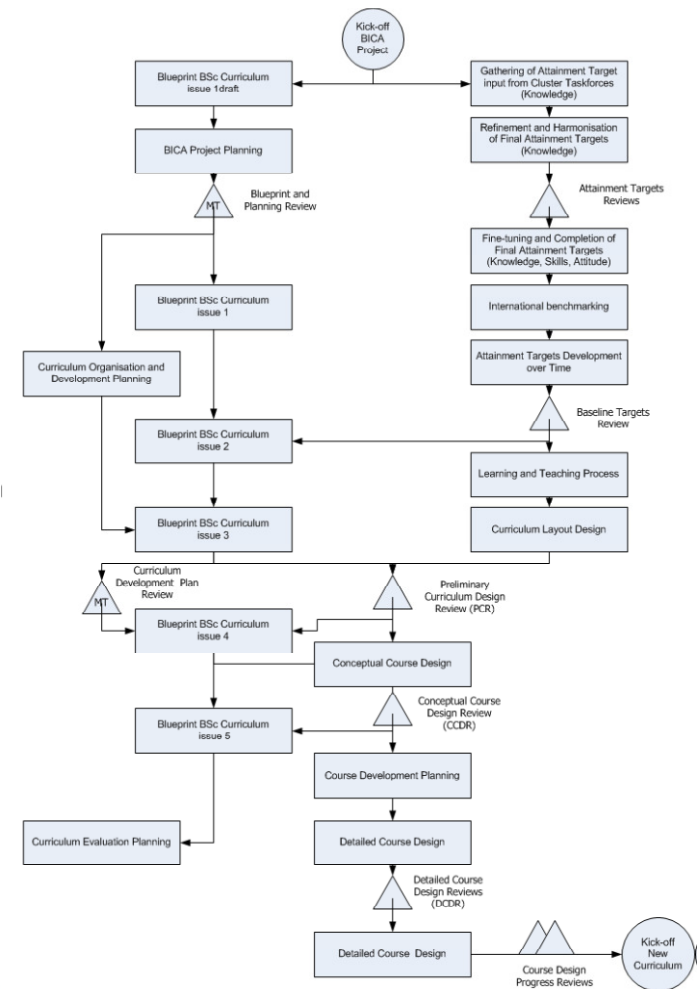
Paralysis by analysis

timestamp	Number	GazePointXLeft	GazePointYLeft	CamXLeft	CamYLeft	DistanceLeft	PupilLeft	ValidityLeft	GazePointXRight	GazePointYRight	CamXRight	CamYRight	DistanceRight	PupilRight
95														
117	0	400.617	261.2175	0.7513002	0.6374704	648.1887	3.773164	0	400.9024	291.1999	0.5961173	0.6521371	636.4001	3.661853
133	1	398.393	264.365	0.7516774	0.6375181	648.2229	3.838122	0	418.6802	288.9395	0.5964873	0.6518686	636.5583	3.64993
150	2	396.2955	273.9963	0.7519954	0.6374961	647.8473	3.77234	0	393.907	301.2133	0.5968071	0.6517037	636.812	3.675684
167	3	402.125	265.7434	0.7523934	0.6374515	648.0519	3.798369	0	399.3078	284.1953	0.5971763	0.6513929	636.6243	3.675363
183	4	414.2168	251.4495	0.7526376	0.6372757	648.2616	3.804291	0	430.813	272.5971	0.5972841	0.6511933	636.4765	3.658003



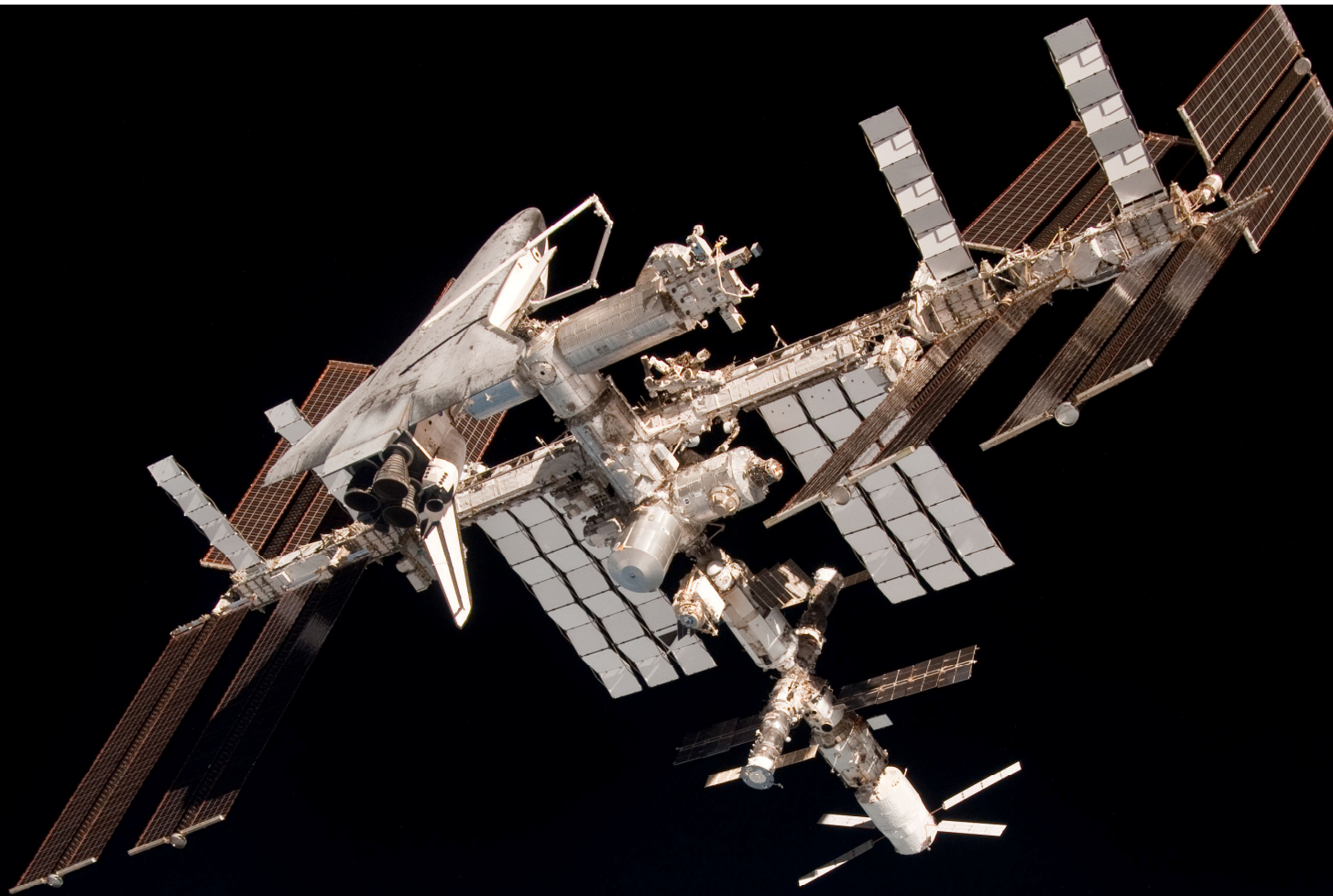
616	62	306.133	377.1607	0.7527038	0.6369888	645.5298	3.792801	0	327.5732	374.5496	0.6007668	0.6480538	634.0999	3.663415
633	30	364.7997	378.6232	0.7559824	0.6365534	645.5516	3.81725	0	331.7	389.1884	0.6010883	0.6480538	634.0999	3.663415
650	31	353.9612	370.7148	0.7562348	0.6367001	645.4138	3.871641	0	348.1435	390.4786	0.6013653	0.6480538	634.0999	3.663415
666	32	358.9431	359.4175	0.7565078	0.6369652	645.5173	3.876763	0	337.5291	386.1313	0.6016595	0.6480538	634.0999	3.663415
683	33	353.6321	369.5632	0.7568166	0.6370528	645.5229	3.863887	0	343.475	381.1053	0.6019519	0.6480272	633.6967	3.694201
700	34	353.5806	366.2641	0.7568903	0.6370781	645.5316	3.89461	0	346.4277	378.5706	0.6021855	0.6477951	634.028	3.689347
716	35	357.3749	368.0299	0.7571286	0.6369992	645.3062	3.907702	0	336.7175	406.1323	0.6023462	0.6476824	633.6699	3.730237
733	36	353.7257	374.9613	0.7573475	0.6370668	645.4896	3.919349	0	330.6978	388.4258	0.6024563	0.6477064	633.4949	3.75837
750	37	352.8519	379.0769	0.7575961	0.637355	645.4871	3.929201	0	340.0563	371.7014	0.6026729	0.6479211	634.0341	3.73941
766	38	351.5531	366.0008	0.7578135	0.6377777	645.552	3.9387	0	360.0238	400.5162	0.6023918	0.6483828	633.5637	3.778778
783	39	448.1368	350.5203	0.7569316	0.6383128	645.7051	3.990263	0	490.351	388.9562	0.6014163	0.6489347	633.8975	3.786376
800	40	476.1451	336.3235	0.7566356	0.6389554	645.7972	3.981491	0	503.899	390.9497	0.6012101	0.6494787	634.3527	3.814618
816	41	482.7939	350.1748	0.7566625	0.6394882	645.7811	3.998034	0	487.8269	396.0833	0.6013622	0.6498792	634.0419	3.88846

Milestones, phase gates



Peer feedback at key events





A curriculum whose story and structure sticks to our minds, and tells the story of the thrill of the profession of an aerospace engineer