
A vertical bar on the left side of the slide, consisting of several colored segments: a white segment at the top, followed by a black segment, a yellow segment, a red segment, and a blue segment at the bottom.

Patrick O'Beirne
Systems Modelling Ltd.
EuSpRIG 2012, Manchester

**THE SPREADSHEET PROBLEM IS
SOLVED ... ISN'T IT?**



Agenda

- Process
 - Policy, Controls, Standards, Metrics
 - People
 - Cultural change, Training
 - Technology
 - Tools
 - Open forum
- 

People

Experience, domain knowledge

Culture

Excel skills, certification

Change management

Process

Individual practices (safety techniques, validation,...)

Lifecycle (analyse, design, build, maintain, migrate)

Controls (project mgmt, change control, review, test...)

Technology

Excel & VBA

Productivity Addins, Extensions, Templates

Development tools, auditing software

Continuous Monitoring



Change programme

- Awareness, Assessment
- EUC Policy and Standards
 - Scope, criticality, controls, external reqts
- Inventory – snapshot & dynamics
- Cultural change
 - Time, resources, priorities, responsibilities
- Gaps to be filled by remediation
 - Temporary resources, training
- Tools aligned with the process



Finding errors

- IIA GTAG-14 Auditing User-developed Applications
- Business criticality & risk
- Static (structural) testing
- Dynamic (execution) testing
- Process review
- Reconciliation



Fixing errors

- Fix the product (remediation)
- Fix the process (is there a better way?)
- Standard COBIT
 - The easy controls that everyone accepts
 - Versions, Backup, Access, Archiving
 - The hard work controls
 - Segregation, Change approval, testing, documentation

Software tools

- [ClusterSeven](#) (CCTV for ss)
- [CIMCON XAudit](#) (assessment, control)
- [Prodiance](#) (bought by MS)
- [Lyquidity ComplyXL](#) (change monitor)
- [ScanXLS](#) (Inventory, Links)
- [XLTest](#) (audit, test)
- [SpACE 3 & EXChecker](#) (Finsbury)
- [Spreadsheet Detective](#)
- [Spreadsheet Professional](#)
- [Operis Analysis Kit](#)
- [Rainbow Analyst](#)
- [Navigator Utilities](#)
- [Incisive Xcellerator](#)
- [Spreadsheet Studio](#)
- [BPM Traverse](#)
- [Explode](#)
- [ActiveData data analysis](#)
- [TM-VBA Inspector](#)
- ...many more

Free addin for attendees


- Just does one thing - formula highlighting
- http://www.sysmod.com/xltest_colorizer.zip
- Zip contains user manual, license, and addins for both 2003 (.xla) and 2007/10 (.xlam) versions of Excel™

The screenshot shows an Excel spreadsheet with the following data:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Dept A													
4 Abrasive	411	668	760	484	367	849	575	233	977	135	941	407	6907
6 Accounting	427	544	321	549	890	635	114	662	184	914	670	670	6579
7 Actuator	381	967	229		574	702	84	564	390	387	964	437	5690
8 Adhesive	823	540	241	179	740	546	740	942	969	876	214	485	7489
9 Advertising	494	567	191	700	325	343	753	374	900	448	445	811	4554
10 Airbrake	115	95	288	816	578	920	102	936	725	64	255	369	5243
11 Total	2656	3381	2050	2727	3464	3996	2381	3711	4145	3124	3489	3174	38303
Dept B													
14 Base	394	608	392	76	77	260	752	616	240	871	183	488	4702
15 Barcode	352	644	714	952	692	229	711	894	377	616	324	457	6478
16 Barter	921	593	485	149	562	350	279	993	342	464	164	237	5893
17 Total	1677	1845	1591	1207	1631	845	1742	2503	959	1951	531	1102	13175
Dept C													
19 Oil	398	172	471	924	903	242	422	219	421	859	184	938	6114
20 Oscillator		861	550	581	547	28	616	234	251	476	500	982	5426
22 Carzette	348	542	697	94	320	189	352	75	350	259	494	428	4150
23 Ceramic	555	618	622	514	971	573	976	792	115	222	926	306	7191
24 Chemicals	527	456	259	927	933	992	954	92	294	409	321	536	6552
25 Chipboard	927	150	853	160	767	848	104	399	642	553	244	162	5349
26 Computer	46	328	805	150	174	109	126	306	419	923	474	79	3939
27 Total	2801	3125	4257	3350	4515	2901	3452	2118	2502	3702	3163	3532	39422
Dept D													
29 Die	70	558	518	179	690	626	240	353	196	815	687	676	5718
32 Diesel	952	277	748	94	846	129	824	642	152	684	970	147	6774
33 Drive	779	211	787	949	738	795	657	247	870	61	691	71	6946
34 Drum	824	889	904	648	362	430	140	301	237	249	593	344	6202
35 Drum	428	696	39	724	778	167	165	419	291	742	112	697	5259
36 Ductwork	422	264	952	849	161	175	507	420	297	475	634	903	6121
37 Total	4120	3338	4564	4236	4432	2522	2455	3283	2494	3416	4460	2847	42769
Dept E													
40 Electric	614	815	760	924	27	415	602	14	822	227	278	161	5772
41 Electric	371	960	517	95	575	622	420	322	463	290	193	204	5942
42 Electronic	810	966	603	909	462	242	554	174	137	625	174	753	6486
43 Engine	469	274	921	890	968	791	230	643	923	718	426	516	7939
44 Environment	925	292	219	40	534	541	787	467	771	219	403	489	5946
45 Event	859	46	600	214	88	378	268	655	354	946	695	192	5295
46 Exponent	203	949	497	964	660	18	584	660	64	687	468	311	6067
47 Extractor	251	871	215	536	162	224	574	5	46	952	170	436	4482
48 Total	4500	5272	4402	4484	3489	3221	4102	2960	3511	4951	2304	131	23044
Dept F													
51 Factory	755	116	680	409	125	458	622	226	827	202	406	249	5237
52 Fastener	254	205	459	212	568	123	764	716	225	164	279	429	6948
53 Fastener	559	698	423	723	242	351	696	405	603	767	896	820	7203



Craftmanship

- Excel, VBA, extension technologies
 - Spreadsheet Check & Control book
 - Professional Excel Development book
 - Spreadsheet Safe certification
 - Practices put in place to avoid **** happening again.
 - Effectiveness of these prescriptions ?
 - Depends on context
- 

Lessons from SW Eng/QA

- Prof Ray Panko
 - Recommended Practices for Spreadsheet Testing
 - Sarbanes-Oxley: What About all the Spreadsheets?
 - Spreadsheet Errors: What We Know. What We Think We Can Do
- Overconfidence
- Cost of wasted effort (“dumb solutions”)
- Measurement & management

Capers Jones: Thirty Software Engineering Issues that have stayed constant for 30 years

4. Finding and fixing bugs is the most expensive software activity.

5. Creating paper documents is the second most expensive software activity.

6. Coding is the third most expensive software activity.

7. Meetings and discussions are the fourth most expensive activity.

8. Most forms of testing are less than 30% efficient in finding bugs.

9. Most forms of testing touch less than 50% of the code being tested.

10. There are more defects in requirements and design than in source code.

11. There are more defects in test cases than in the software itself.

14. About 15% of software defects are delivered to customers.

17. About 7% of all defect repairs will accidentally inject new defects.

22. The failure mode for most cost estimates is to be excessively optimistic.

29. Average defect repair rates are about 10 bugs or defects per month.

30. Programmers need about 10 days of annual training to stay current.



Thank you

- Patrick O'Beirne, Systems Modelling Ltd
 - Telephone +353 5394 22294
 - Email: Patrick (AT) sysmod.com
 - Systems Modelling website:
<http://www.sysmod.com>
 - LinkedIn profile:
<http://ie.linkedin.com/in/patrickobeirne>
- 