



Enterprise Java Development

What's new in Java EE

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AGENDA

Past & Present

Standard Enterprise architecture & specs

Upcoming features in Java EE 8

Future

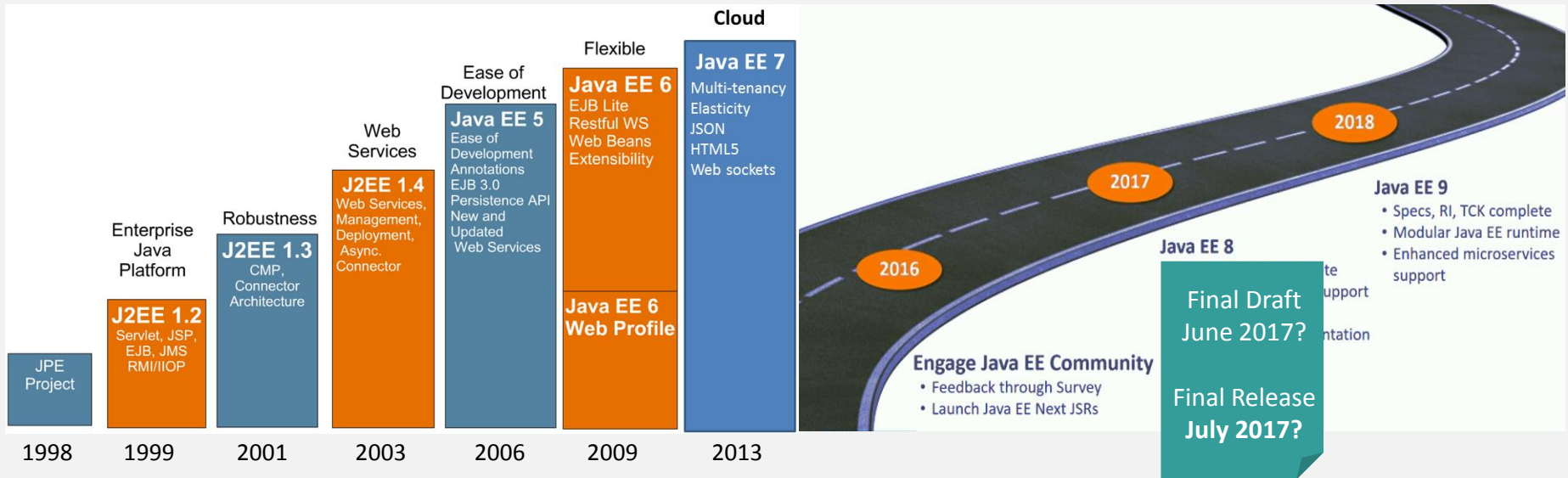
PAST & PRESENT

Episode IV

A NEW HOPE

*It is a period of civil war.
Rebel spaceships, striking
from a hidden base, have won
their first victory against
the evil Galactic Empire.*

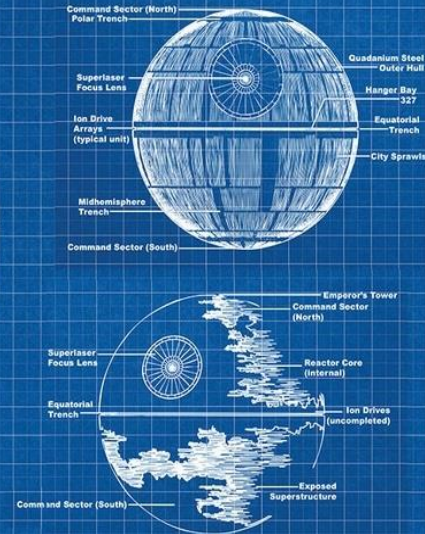
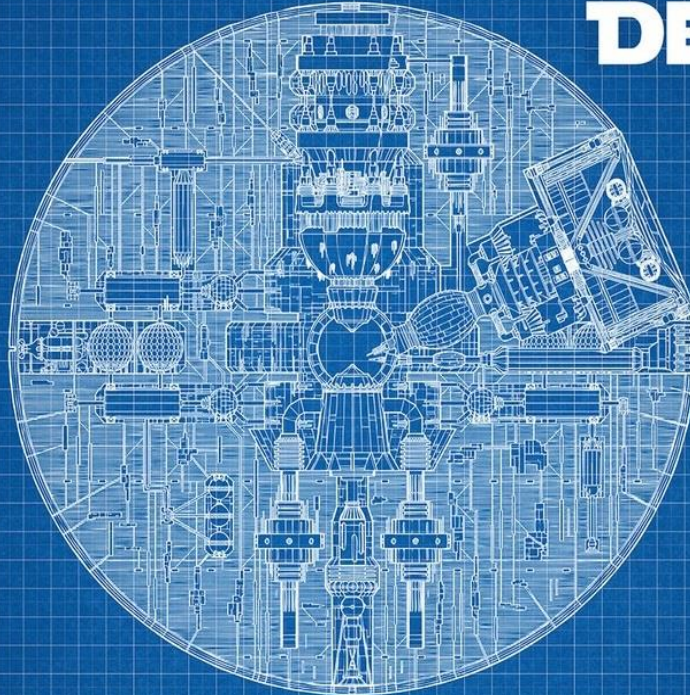
ROADMAP



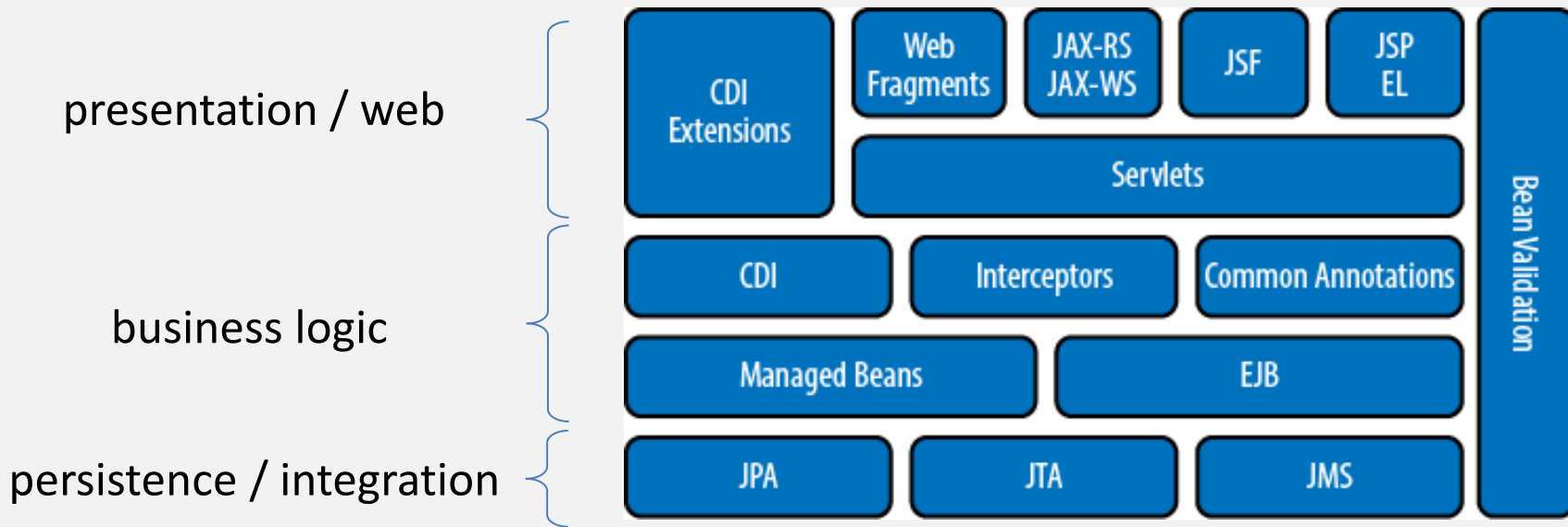
4 What's new in Java EE

STANDARD ENTERPRISE ARCHITECTURE

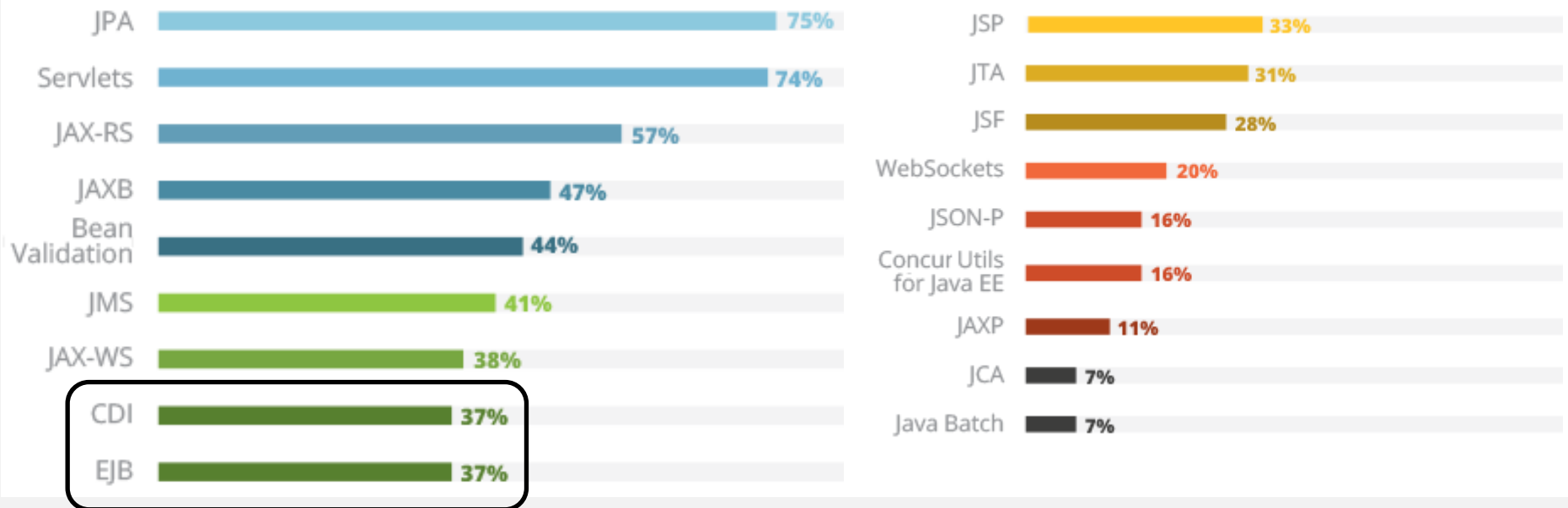
DEATH STAR



MULTI-TIERED APPLICATION



POPULAR SPECIFICATIONS



ZeroTurnaround's survey of ~1700 developers

UPCOMING FEATURES IN JAVA EE 8

I felt a great disturbance in the Force ...

... as if several **JSRs** spec leads suddenly cried out in terror and were suddenly silenced ...



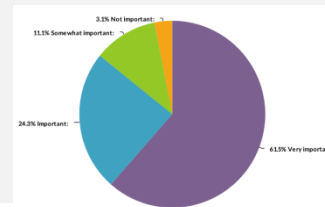
JSON BINDING 1.0

Provide mapping between JSON data and Java objects (JAX-B for JSON)

Standardize current technologies like Jackson & Gson

Handle JSON media type for JAX-RS

Fill an old gap in the Java EE specs



JSON BINDING 1.0 – SAMPLE

```
Hero hero = new Hero();  
hero.setName("Jason");  
hero.setAge(25);  
hero.setAffiliation("Argonauts");
```

```
Jsonb jsonb =  
    JsonbBuilder.create();  
    jsonb.toJson(hero)  
    {  
        "name": "Jason",  
        "age": 25,  
        "affiliation": "Argonauts"  
    }
```

JSON PROCESSING 1.1

Integrate emerging IETF standards like: JSON Pointer, JSON Patch & JSON Merge Patch

Support Java 8 streaming API

Allow parsing big JSON

JSON PROCESSING 1.1 – SAMPLE

```
[  
  {  
    "name": "Jason",  
    "age": 25,  
    "affiliation": "Argonauts"  
  }  
]
```

```
[  
  {  
    "op": "replace",  
    "path": "/0/age",  
    "value": 28  
  }  
]
```

```
new JsonPatch(patch).apply(heroes);
```

```
new JsonPatchBuilder().replace("/0/age", 28).apply(heroes);
```

JAX-RS 2.1

Asynchronous clients with reactive programming

Server-sent events

Non-blocking I/O

Circuit breaker API?

JAX-RS 2.1 – SAMPLE

```
CompletionStage<Response> csResponse =  
ClientBuilder.newClient()  
    .target("https://muffin.musala.com/")  
    .request().rx().get();
```

THE DARK SIDE?



Java Message Service 2.1 (joined)

Java EE Management API 2.0 (joined)

Configuration

Health Check

Security: OAuth & OpenID

SUMMARY

| API from Original Java EE 8 Proposal | Survey Item | Survey Rank | Revised Java EE 8 Proposal |
|--------------------------------------|-----------------------|---------------|-------------------------------------|
| JAX-RS 2.1 | REST Services | 1 | No change, retain |
| Servlet 4.0 | HTTP/2 | 2 | No change, retain |
| JSON-B 1.0 | JSON-B | 6 | No change, retain |
| JSON-P 1.1 | JSON-P | 14 | No change, retain |
| CDI 2.0 | Not surveyed | N/A | No change, retain |
| Bean Validation 2.0 | Not surveyed | N/A | No change, retain |
| JSF 2.3 | Not surveyed | N/A | No change, retain |
| Security 1.0 | Not surveyed | N/A | No change, retain |
| Management 2.0 | Management | 18 | Withdraw Mgmt 2.0, Include Mgmt 1.0 |
| JMS 2.1 | JMS | 19 | Withdraw JMS 2.1, Include JMS 2.0 |
| MVC 1.0 | MVC | 21 | Withdraw |

+JCache

FUTURE

Microservices – need for uberjars, metrics, discovery, circuit breakers, etc. (70%)
→ MicroProfile & JAX-RS

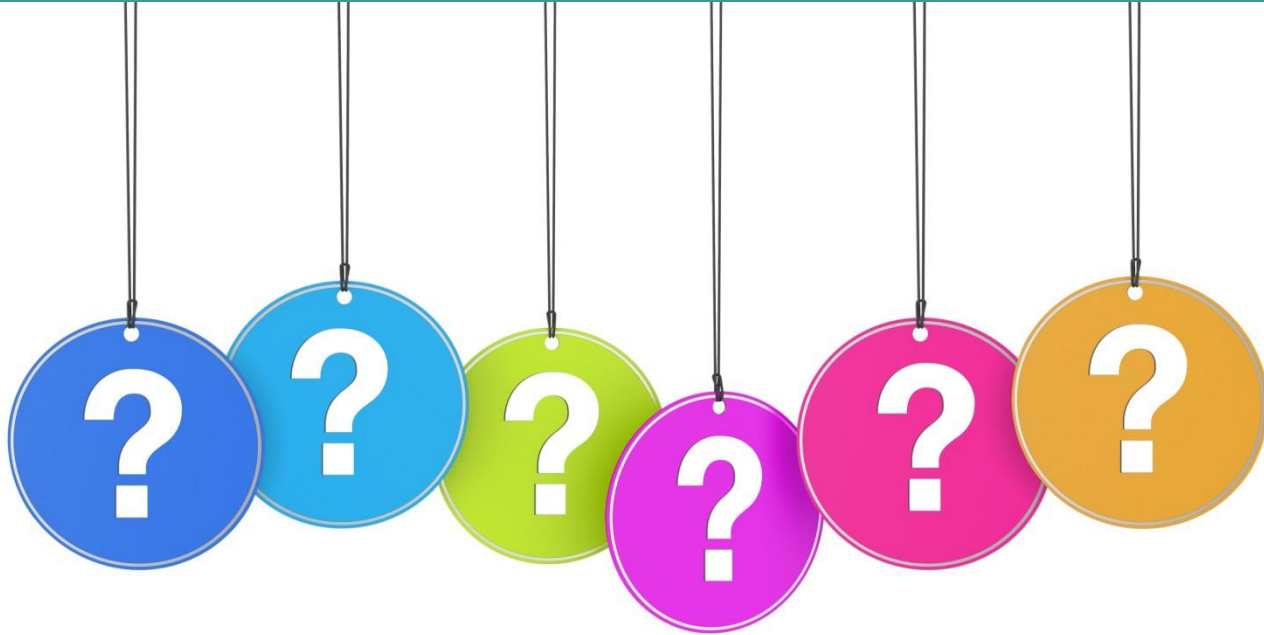
Reactive Programming – wait & see + add hoc improvements (70%)
→ JAX-RS

NoSQL – interested in standardization (60%)

Innovation vs Standardization – mildly conservative and cautious (56%)

Java EE survey report <https://drive.google.com/file/d/0B5v0dmBHAIKTRW5FT0twN1JIRTA/view>

QUESTIONS?



Confidence leads to Questions. Questions lead to Answers. Answers lead to Knowledge.

THANKFUL I AM



PANEL – ENTERPRISE JAVA DEVELOPMENT



Join us with a question