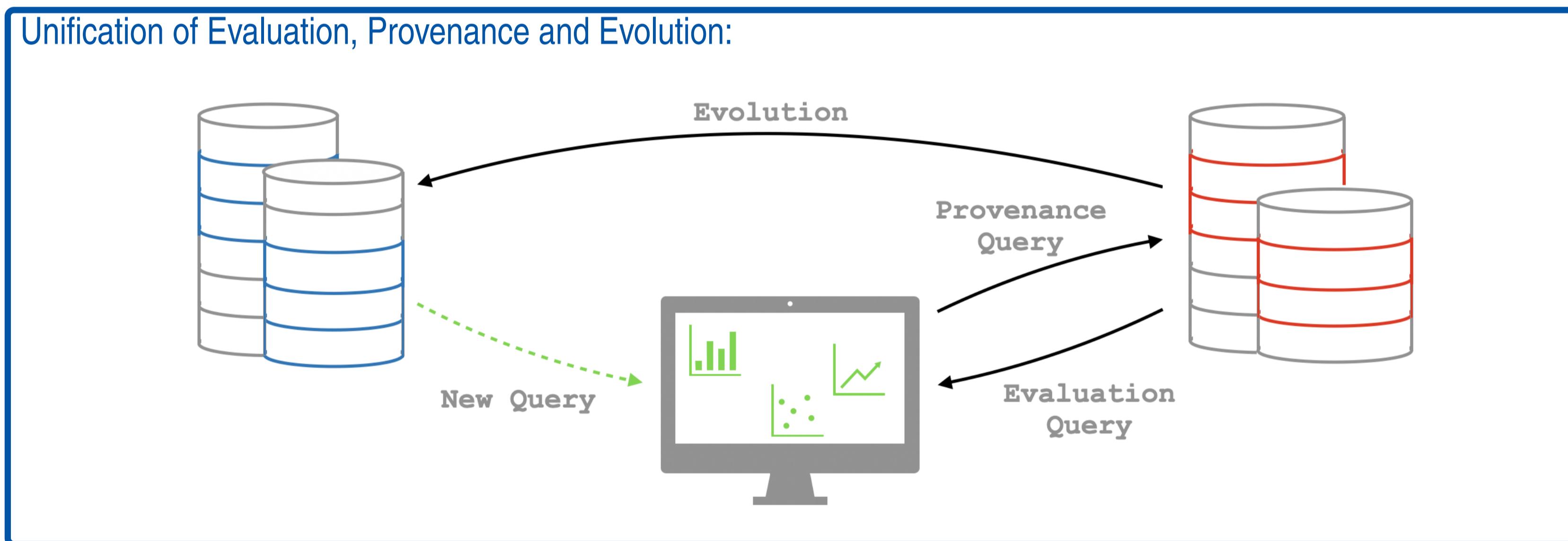




Schema Evolution and Reproducibility of Long-term Hydrographic Data Sets at the IOW

Motivation



Schema Evolution at IOW

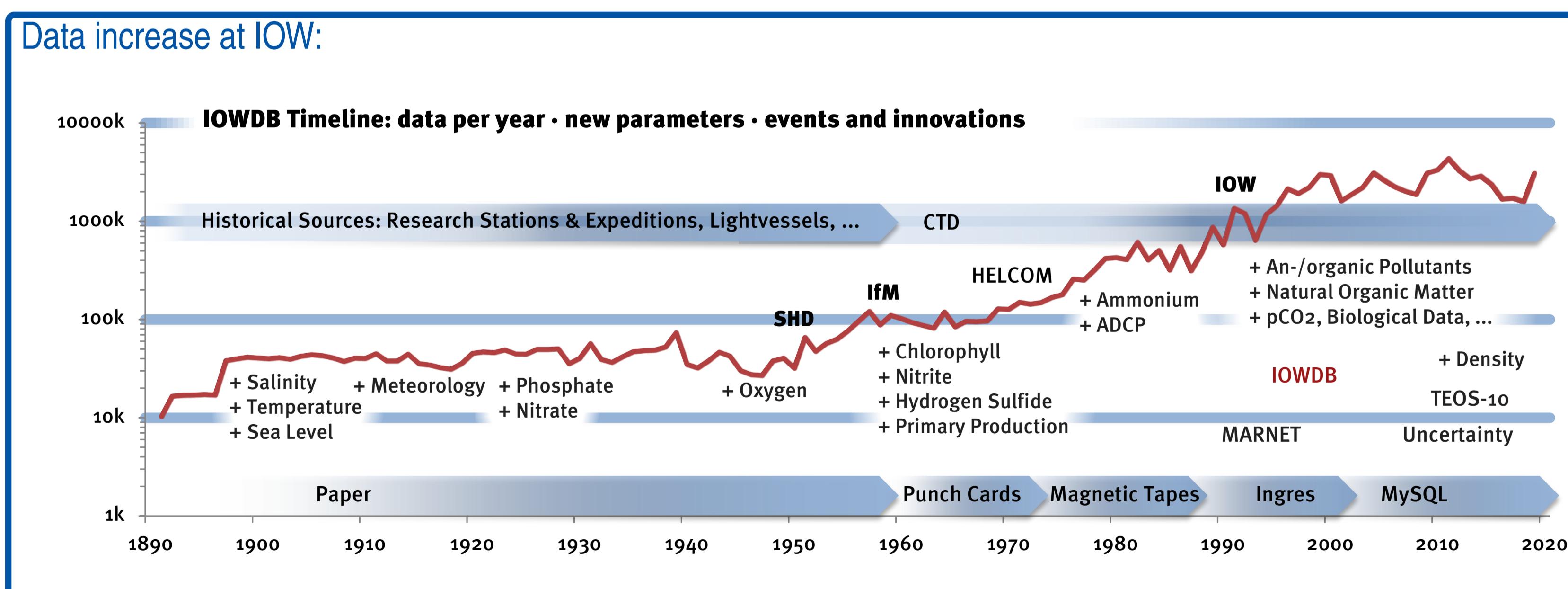
Specification of Schema Changes:

- adding and deleting attributes
- creating relations
- adding and deleting primary keys
- adding and deleting foreign keys
- renaming attributes
- merging and splitting attributes

Detected Schema Changes:

	basic SMOs		extended version	
	# changes	percentage share	# changes	percentage share
CREATE Table	1	1.6%	1	2.3%
ADD Column	45	72.6%	35	79.5%
DROP Column	15	24.2%	0	0%
RENAME Column	1	1.6%	1	2.3%
MERGE Column			4	9.2%
SPLIT Column			3	6.8%

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SPLIT Column:

```

SPLIT Column a IN R TO d USING func1, e USING func2
ADD Column d AS func1(a) INTO R;
ADD Column e AS func2(a) INTO R;
DROP Column a FROM R;

```

...	Date	...
...
...	24.12.1977 - 16.01.1978	...
...	08.05.1979 - 01.05.1980	...
...

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Example:

```

ADD Column StartDate AS func1(Date) INTO Cruises;
ADD Column EndDate AS func2(Date) INTO Cruises;
DROP Column Date FROM Cruises.

```

...	StartDate	EndDate	...
...
...	24.12.1977	16.01.1978	...
...	08.05.1979	01.05.1980	...
...

CRUISES

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