



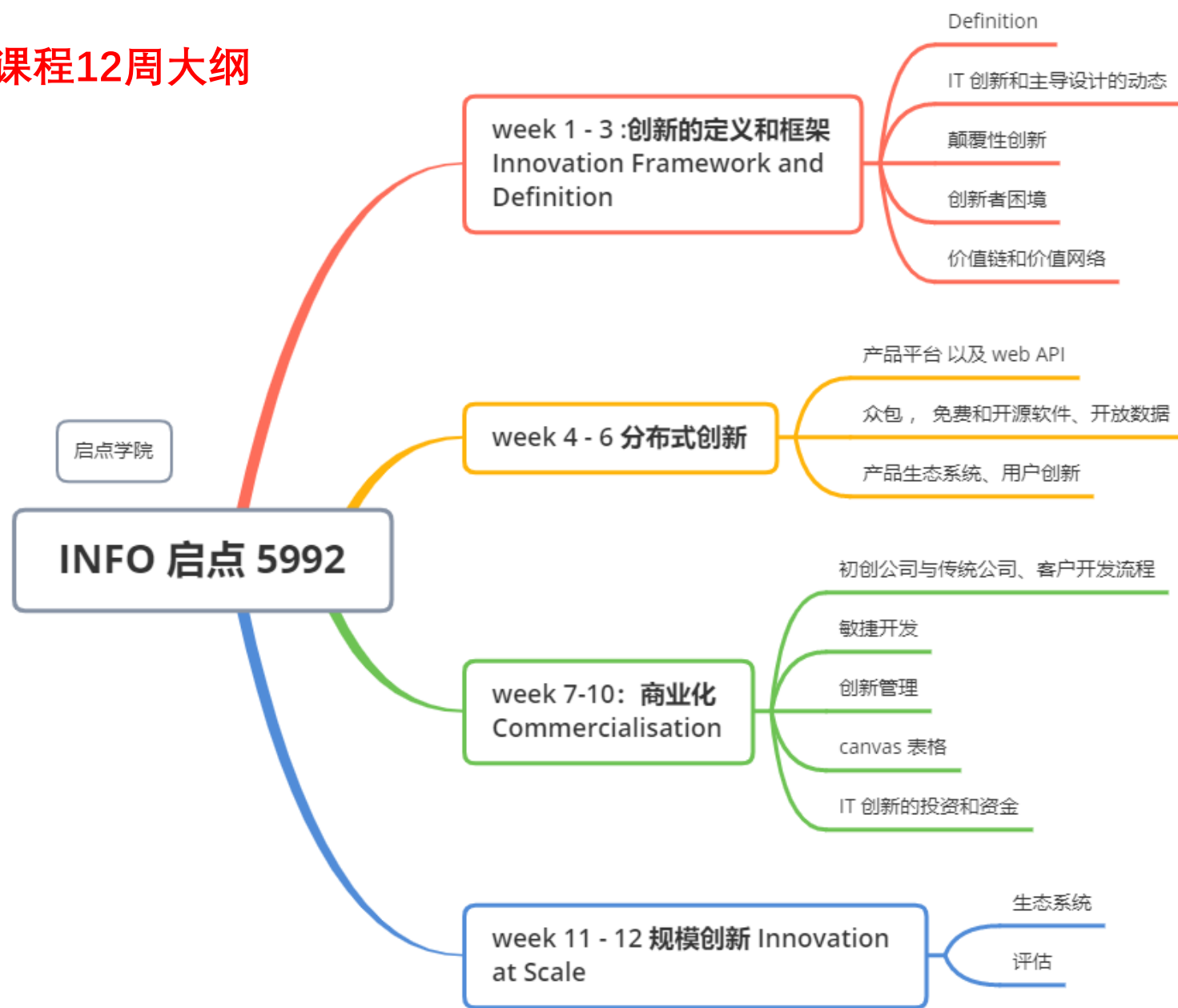
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**WEEK05**

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## 课程12周大纲



## WEEK 5 分布式创新的方法 3,4,5 三种方法

### Crowdsourcing innovation / Crowdfunding Innovation

#### 1. Crowdsourcing 的定义: Crowd + Outsourcing 聚集资源

- Crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call.

众包(Crowdsourcing)是指公司或机构将曾经由员工承担的职能外包给一个不确定(通常规模很大)的网络, 通过 open call 的形式。

- The crucial prerequisite is the use of the open call format and the wide network of potential laborers.

采用开放式呼叫模式和广泛的潜在劳动者网络

## 2. Crowdsourcing: Newer definition 的新定义

想象 kaggle 例子，简称公司用最少的利益白嫖成果。

- a) Crowdsourcing is a type of **participative online activity** in which an individual, an institution, a non profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the **voluntary undertaking of a task** . 自愿活动+线上活动
- b) The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit .  
任务的执行，复杂性和模块化的可变性，以及人群应带来的工作，金钱，知识和/或经验的参与，**总是需要互惠互利**。
- c) The user will receive the satisfaction of a given type of need, be it economic, social recognition, self esteem, or the development of individual skills, while the crowd sourcer will obtain and utilize to their advantage what the user has brought to the venture, whose form will depend on the type of activity undertaken. **参与者和使用者将获利**



### 3. Crowdsourcing 分为 8 步:

## Crowdsourcing: The typical crowdsourcing process

### The Crowdsourcing Process *In Eight Steps*



4. **Crowdfunding is the sourcing of funds from a crowd, which is a specific type of crowdsourcing.** 众筹是特定类型的 crowdsourcing, 从群众中筹集资金。

5. **Why do people engage with crowdsourcing? 人们为什么会愿意被白嫖???**

1. 赚钱。
2. 发展个人技能。
3. 发展和其他大佬的关系。
4. 为了未来就业做准备。
5. 挑战自己。
6. 参与社会, 交朋友。
7. 打发无聊时间。
8. 为了公众事业做贡献。
9. 为了和别人分享。
10. 为了快乐。

Many reasons including:

- “the desire to earn money;
- to develop one’s creative skills;
- to network with other creative professionals;
- to build a portfolio for future employment;
- to challenge oneself to solve a tough problem;
- to socialize and make friends;
- to pass the time when bored;
- to contribute to a large project of common interest;
- to share with others; and
- to have fun.” Brabham (2011)

## Releasing data sets “Open data”

### 1. What is ‘Open Data’?

- a) **Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and Put most succinctly:**

“开放意味着任何人都可以出于任何目的自由访问、使用、修改和共享(最多以保留出处的要求为前提，并以最简洁的方式表述:

- b) **“Open data and content can be freely used, modified, and shared by anyone for any purpose”.**

“开放的数据和内容可以被任何人出于任何目的自由使用、修改和共享”



## 2. Value in Open Data 开放式数据的价值

- **economic value: e.g. increased efficiency, new products and services, and a consumer surplus (cost savings, convenience, better products)**  
经济价值. 例如提高效率、新产品和服务, 以及消费者剩余(节省成本、方便、更好的产品)
- **Big data's impact: e.g., replacing or supporting human decision making.**  
大数据的影响, 例如取代或支持人类的决策
- **business opportunities: e.g., new product and services**  
商业机会, 如新产品和服务
- **Governments to play a central role:**  
政府要发挥核心作用, 利润犯罪数据, 人口普查, 经济数据, 公共交通数据等等



### 3. Value in Open Data---Self reinforcing cycle 自我强化循环中的价值

- ✓ The benefits of open data can be self reinforcing: they will increase as individuals perceive the advantages and help to improve the accuracy and detail of the information available.

开放数据的好处是可以自我强化的:当个人意识到这些好处并帮助提高可用信息的准确性和细节时, 这些好处就会增加。

- ✓ However, this cycle can gather momentum only if private industry and public agencies cultivate a vibrant open data ecosystem and implement policies to protect stakeholders.

然而, 只有私营企业和公共机构培育一个充满活力的开放数据生态系统, 并实施保护利益攸关方的政策, 这个循环才能形成势头。

- ✓ For companies, that means putting in place the technologies and talent to collect and analyze data.

对企业来说, 这意味着需要投入人力物力和科技实力去收集和整合分析数据

- ✓ For individuals as both consumers and citizens it means being vigilant, savvy providers and users of open data.

对于作为消费者和公民的个人来说, 这意味着要警惕、精明地提供和使用开放数据。

# Free and Open Source Software 这两者是不同的

## 1. 专有软件与自由和开源软件的对比:

Proprietary software vs Free and open source software.

(Traditionally most software was proprietary, 传统上, 大多数软件都是专有的)

**专有软件:** Proprietary software is software built by or for a specific person, organization or group of organizations where:

专有软件是指由特定的人、组织或组织集团构建的软件, 或为这些特定的人、组织或组织集团构建的软件:

- The owner holds intellectual property rights over the software; 所有人对该软件拥有知识产权
- The owner has total control over the software and how it is used. 所有者对软件及其使用有完全的控制权

**开源软件:** In free and open source software:

- Source code is made available. 源代码是可用的
- Source code can be changed and redistributed by others. 源代码可以被其他人更改和重新发布

## 2. What is Free Software? 什么是自由软件，四种基本 freedom。

“Free software is a matter of the users' freedom to run, copy, distribute, study, change and improve the software. More precisely, it means that the program's users have the four essential freedoms:

自由软件是用户运行、复制、发布、研究、改变和改进软件的自由。更准确地说，它意味着程序的用户拥有四种基本自由：

- The freedom to run the program, for any purpose (freedom 0).  
为任何目的运行程序的自由(自由 0)。
- The freedom to study how the program works, and change it to make it do what you wish (freedom 1). Access to the source code is a precondition for this.  
➤ 研究程序如何工作的自由，并根据自己的意愿对其进行修改(自由 1)。访问源代码是实现这点的先决条件。
- The freedom to redistribute copies so you can help your neighbor (freedom 2).  
重新分发副本以帮助他人的自由(自由 2)。
- The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.  
将修改版本的副本分发给他人的自由(自由 3)。通过这样做，您可以给整个社区一个从您的修改中受益的机会。访问源代码是实现这点的先决条件。”



### 3. Stallman's Argument 斯托曼的观点 (为什么需要开源软件)

- Computer software is becoming more and more critical for the running of a free society. 计算机软件对于一个自由社会的运行变得越来越重要
- If that software is controlled by companies or governments, the software can be used to restrict or monitor people. 如果该软件由公司或政府控制，则可以用来限制或监控人员
- So, it is necessary that source code be available for all software. 因此，有必要为所有软件提供源代码
- If source code were not freely available, a limited number of very powerful people would dominate computing. 如果源代码不能免费获得，那么数量有限的非常强大的人将主宰计算机行业



#### 4. What is Open Source Software? 什么是开源软件?

- Freely redistributable. 自由可再发行的
- Source code must be available for free or at reasonable reproduction cost.  
源代码必须是免费的或以合理的复制成本提供的
- Modifications and derived works must be allowed and be distributable under same terms.  
修改和衍生作品必须被允许并且在相同的条款下被分发。
- Can protect integrity of author's source code as long as allow source code patches.  
能保护作者的源代码的完整性，只要允许源代码补丁。
- No discrimination against people/groups.  
不歧视任何人/团体。
- No discrimination against fields of endeavour.  
没有对努力领域的歧视。
- Must not be restricted to use with a specific product.  
不得限制与特定产品一起使用。
- Must not place restrictions on other software distributed with it.  
不能对与它一起发布的其他软件加以限制吗。
- Must be technology neutral.  
必须技术中立。

## 5. Difference between Free Software and Open Source Software 自由软件和开源软件的区别

According to Stallman, "Open source is a development methodology; free software is a social movement." 开源是一种开发方法;自由软件是一场社会运动。

Open Source covers a wider range of licence types

开源涵盖了更广泛的许可证类型

More ability to mix Open Source software with proprietary software than is the case for free software

与自由软件相比，更有能力将开放源码软件与专有软件结合在一起

The Open Source concept was developed to bring major software businesses and other high tech industries into the mix.

开源概念的发展是为了将主要的软件企业和其他高科技产业结合起来。

When avoiding distinguishing between these, people use the terms:

当避免区分这两种软件时，人们会使用以下术语：

➤ FOSS (Free and Open Source Software)

自由和开源软件

➤ FLOSS (Free/ Libre and Open Source Software)

FLOSS(免费/自由和开源软件)

## 6. Growing importance of free and open source software 自由和开源软件日益重要

Many companies use open source software such as for:

1. Internal IT infrastructure ( eg Linux) 内部 IT 基础设施(如 Linux)
2. Building and running web services ( eg Apache, Apache Tomcat, JBoss). 构建和运行 web 服务(如 Apache、Apache Tomcat、JBoss)
3. Building software for redistribution. 为再分配构建软件
4. Open source software allows companies to rapidly innovate their infrastructure and services. 开源软件允许公司快速革新他们的基础设施和服务

## 7. Challenges in using FOSS in products and services 在产品和服务中使用自由/开源软件的挑战

- Possibility of accidentally “contaminating code”. 意外“污染代码”的可能性
- Ensuring adequate quality of the final product if it includes some open source software of unknown quality. 确保最终产品的足够质量，如果它包含一些质量未知的开源软件
- Avoiding security vulnerabilities in underlying code (that may already be known to hackers). 避免底层代码中的安全漏洞(黑客可能已经知道)

## 8. How can companies address the challenges 企业如何应对这些挑战

**Companies developing products (hardware or software) or services and using open source software should have an open source policy and controls to ensure good governance.**

开发产品(硬件或软件)或服务并使用开源软件的公司应该有一个开源策略和控制来确保良好的治理。



## 9. Obligations when using open source software. 使用开源软件时的义务

The obligations depend on the actual software licence used by the software. 义务取决于软件所使用的实际软件许可证。

Your obligations may include:

- 如果您在您的软件中重新发布开源软件：提到你曾经用过它
- 重新分发您对它所做的任何更改
- 不就您可能持有的与开源软件特性有关的专利起诉其他公司

## 10. Summary 总结：自由软件和开源软件在以下方面越来越重要：

- R&D in established companies; and Startups  
成熟公司的研发;和创业公司
- One factor leading to the high rate of IT innovation is the availability of open source software.  
导致 IT 创新速度高的一个因素是开放源代码软件的可用性
- Creating innovative new software services/startups is now accessible to us all thanks to the web and open source software.  
多亏了网络和开源软件，我们现在都可以使用创新的软件服务/创业公司



最细致的知识点讲解  
最专业的入学攻略  
最耐心的贴心辅导

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